SOAP AND CHEMIC SEPTEMBER 1959 SPECIALT





Set to be marketed nationally in mid-September is Armour's "Chiffon" liquid detergent in new 12, 22 and 32 ounce high density polyethylene bottles.

THIS ISSUE

Bleaches	and	Brig	hte	ne	TS										 	79
Synthetic	Dete	rgen	ts i	n	Wa	ter	5	up	pl	ie	15	* 1		 *	 	53
Aerosol S	teril	ants													*	101
Hazardou	s Su	bstan	ces	L	aw	H	e cr	rin	a				 	 		113



It stands apart...

Essentially for you



Our 160th Year of Service

flavor bases dry soluble seasonings essential oils aromatic chemicals perfame bases because its color is the most brilliant, its texture the richest, its form the most perfect. Even among the rare and the beautiful, one always stands apart, expressing in nature's own language life's unending search for the ultimate. Vibrant, lovely, diversely fragrant and alive, flowers represent the primal perfume, the poet's joy, the lover's offering. Yet even in these favorite children of nature, some are more perfect than others . . . and like a D&O perfume, will always stand apart. In a room filled with the myriad scents of a dozen rare fragrances, one, like the finest flower, will command the field. That one will be D&O!

Technical assistance available on your premises.

DODGE & OLCOTT, INC.

180 Varick Street, New York 14, N. Y.

Sales Offices in Principal Cines

ISOTHAN®Q-75...

the
by-word in
dandruff
control

Improve the quality of Anti-Dandruff products with proven ISOTHAN. Now available in a super concentrated solution of 75% activity.

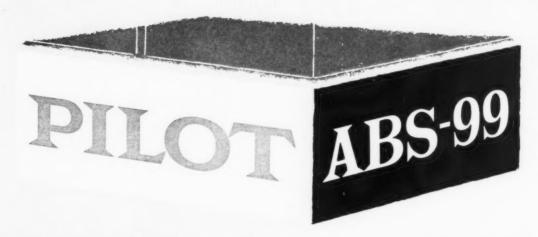
ISOTHAN Q-75, in concentrations of 0.1% or less (Anhydrous Basis), does not irritate normal skin or eyes. Ideally suited for applications that include rinses, hair tonics and other dandruff control products. In addition, ISOTHAN Q-75 is a light colored, water soluble liquid with a pleasant odor — a big factor in maintaining product acceptance. ISOTHAN Q-75 is compounded only by ONYX — the recognized leader in the field of anti-dandruff protection. ISOTHAN Q-75 is uniformly prepared according to rigid specifications. Close supervision is maintained through exacting quality control.

Remember . . .

for positive dandruff control . . . ISOTHAN Q-75 from ONYX. Additional information, samples, dermatological and toxicological studies available on request. Consult ONYX on your requirements.



Onyx Oil & Chemical Company
JERSEY CITY 2, NEW JERSEY
Our 49th Year



CORNERSTONE for building

PRODUCTS

MAC

Whether you formulate shampoos for rugs, cars, or heads, or many other surface active products marketed today – Pilot ABS-99 is your cornerstone for making them better!

ABS-99 is a 98% pure sulfonic concentrate—the highest commercially available—that you can keep in plain steel containers, pump or pour, and neutralize without bleaching.

ABS-99 has outstanding stability, detergency and sudsing character which are a

result of Pilot's unique ice-cold, dilute, airfree vacuum sulfonation.

This "cold processing" means a better material for building better products: emulsion cleaners without water contamination; organic emulsifiers without inorganic acid contamination; liquids and pastes of low sulfate content; and "dry neutralization" compounding free from moisture or sulfate dilution—dry mixes, thus made, can be gradually raised to higher concentrations by adding quantities of Pilot HD-90, high active Alkyl Aryl Sulfonate flake.

Write for literature and samples today.

PILOT

215 WEST 7th STREET • LOS ANGELES 14, CALIFORNIA

Manufacturers of Sulfonic Acid Dodecyl Benzene Sulfonates Sodium Toluene Sulfonate Volume XXXV, No. 9-Sept., 1959

Cover photo: Armour's "Chiffon Liquid" detergent is believed to be first such product marketed nationally in high density linear polyethylene. Aqua colored bottles by Continental Can (12 and 22 ounce sizes) and Owens-Illinois Glass Co. (32 ounces) match color of product. Phillips Chemical's "Marlex 500" polyethlene was used for bottles, which feature unusual silkscreen label. Armstrong Cork caps.

SOAP AND CHEMICAL



MEMBER



SINCE 1934

IN THIS ISSUE

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- 45 IN BRIEF AS THE EDITOR SEES IT
- 49 AS THE READER SEES IT
- 51 DETERGENTS, CLEANSERS, SOAPS
- 53 SYNDETS IN WATER SUPPLIES, by Jesse M. Cohen
- 57 ANALYZING PERFUME MATERIALS, by Fred H. Lohman
- 60 BRECK MESSAGE NETWORK, by Arthur C. Robertson
- 63 TEXTILES AND DETERGENCY, by H. C. Borghetty and G. M. Gantz
- 66 COMPLAINT "UNNECESSARY" P&G TELLS FTC
- 75 CHEMICAL SPECIALTIES
- 79 BLEACHES AND BRIGHTENERS, by Robert E. Ferris
- 82 FLY CONTROL, by W. C. McDuffie
- 91 AUTOMOTIVE SPECIALTIES-OUT OF DATE IN 10 YEARS?, by A. F. Connolly
- 95 LEVELING AGENTS IN FLOOR WAX, by Alfred Kroner
- 101 ETHYLENE OXIDE IN AEROSOLS, by E. C. Haenni and R. A. Fulton
- 113 HAZARDOUS LABELING BILL HEARING
- 129 PACKAGING
- 133 PACKAGING NOTES
- 139 NEW PRODUCTS PICTURES
- 147 NEW TRADE MARKS
- 149 PRESSURE PACKAGING
- 159 PRODUCTION
- 161 SOAP PLANT CORROSION CONTROL
- 167 BOOK REVIEWS
- 169 NEW PATENTS
- 171 SOAP PLANT OBSERVER
- 173 PRODUCTS AND PROCESSES
- 175 BULLETINS AND EQUIPMENT
- 179 NEWS
- 203 PROFESSIONAL DIRECTORY
- 205 CLASSIFIED ADVERTISING
- 210 ADVERTISERS' INDEX
- 211 MEETINGS CALENDAR
- 212 TALE ENDS

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CHEMICAL SPECIALTIES MANUFACTURERS ASSN

BORAX

GRANULAR...in special uniform meshes in a variety of grain sizes



Vacuum crystallizers are an important segment of the new, ultra-modern, refinery recently completed and on stream at Boron, California.

Granular borax improves powdered hand soaps



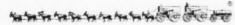
Are you making powdered hand soaps? Or cleansers? Evaluate the use of granular borax in your product! Others have found that borax boosts the cleansing power . . . makes soap work better in any water. So, today we're producing more granular borax than ever before; witness our new vacuum crystallizing plant shown above. It is part of the newly expanded refinery built to assure our customers of a dependable basic source of quality borates . . . in every form for every possible use. Get in touch with us now for helpful suggestions. You'll get sound advice. We've been specialists in borates and boron products for more than half a century!

... and here are



... of interest to Chemical **Specialties**

GRANULAR BORAX . . . in special screen sizes BORAX 5 MOL... Pentahydrate form of Sodium Tetraborate SODIUM METABORATE SODIUM PENTABORATE POTASSIUM TETRABORATE . . . Granular POTASSIUM PENTABORATE... Granular and Powdered Manufacturers ... POLYBOR®



United States Borax & Chemical Corporation



Pacific Coast Borax Company Division

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SOAP and CHEMICAL SPECIALTIES

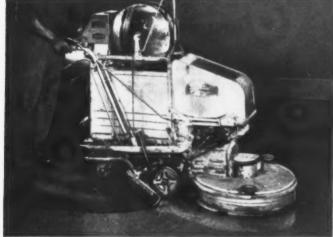
NINOL

STEPAN
CHEMICAL COMPANY

NEW TYPE AMIDE

SOLUBILITY

IN HARD WATER AND MAXIMUM STABILITY



SYNTHETIC LIQUID FLOOR CLEANERS

- **◆** WAX STRIPPERS
- ALKALI GLEANERS
- **◆** DETERGENT SANITIZERS

This Stepan product is a completely new and different type of fatty acid alkylolamide detergent derived from coconut oil. Among its distinctive advantages over the usual amides, Ninol 1301 offers the following: HARD WATER CLARITY. Clearly soluble in hard water. There is none of the usual haze or turbidity and this carries over to the formulated cleaners based on Ninol 1301. It is soluble in water at all concentrations. COMPATIBILITY WITH QUATERNARIES. Disinfectant cleaners can be formulated from Ninol 1301 and quats with excellent clarity and viscosity. ALKALINE STABILITY. Completely stable to boiling in alcoholic potash, making it possible to use Ninol 1301 in highly alkaline liquids. COLOR. In the very light yellow range, making it possible to dye formulations to any particular shade. ACTIVITY. Virtually 100% active, giving maximum detergency per pound. Write for samples, prices, literature.

STEPAN

427 W. Randolph St. Chicago 6, Illinois STate 2-4711 STEPAN CHEMICAL COMPANY 427 W. Randolph Street Chicago 6, Illinois

Gentlemen: Please send me complete information, prices and a sample of NINOL 1301.

Name	
Firm	

Street Address

City Zone State



For private brand resale buyers of waxes and kindred products

..Your Quality Guide

Beauty and Durability

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic, but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of beauty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason for use of a floor wax...beauty and protection.

Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Over-doing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as water-resistance under most normal conditions.

WATER EMULSION WAXES

Each of Candy's floor waxes are all-around top quality for certain traffic conditions. They impart the finest protection and beauty to floors for which best suited.

CANDY'S SUPREME (standard)
BRIGHT BEAUTY®
CANDY'S SUPREME Special WR
SUPER (AND-DOX®
(AND-DOX® # CS
(AND-DOX® # CS)

All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

Solid Content

The percentage of solid content is not nearly as important as the quality of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Overwaxing and resultant greater difficulty in removal for periodic maintenance may do more harm than good.

Carnauba Wax

The most important features of a good wax...all-around quality of performance...are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba alone imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

Other HIGHEST QUALITY products of CANDY & COMPANY, Inc.

CANDI-COAT 1000, WATER RESIN EMULSION

As a floor coating for use under specific conditions of continued maintenance on certain types of floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging...nothing but water to buy or mix in.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits repeated repolishing with a dry cloth, thus saving many re-applications. A very economical polish of the very nighest quality.

Bright Beauty PASTE WAX

Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and usage life.

Bright Beauty LIQUID (spirit) PREPARED WAXES

A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a "dry

cleaner" to keep surfaces waxed protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH As a glass cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre without abrasion and can even correct the abuses of scratchy "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX

Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove...free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom floors.

Bright Beauty Heavy Duty PASTE CLEANER

Cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign matter.

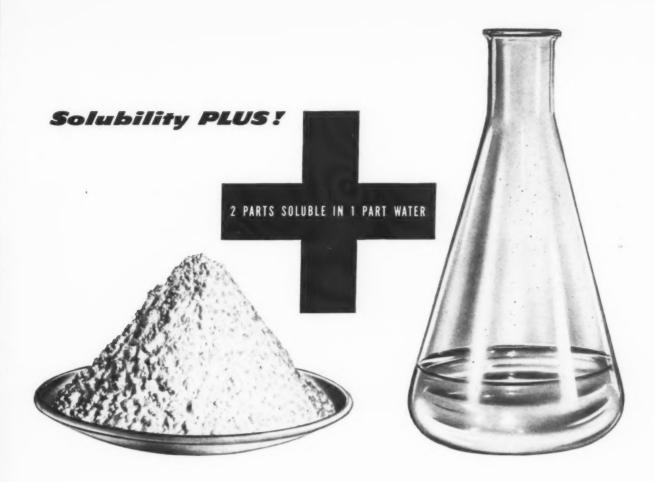
CONTAINER SILK SCREEN LABELING

Now you can have dramatic, colorful labeling of your private brand name on all 55, 35, 30, 20 & 15 gal. drums and 5 gal. pails. This added service is accomplished right in our plant...your inspection invited...or write for details.

Candy & Company, Inc

Wax Specialists for over 65 years

2515 W. 35th ST., CHICAGO 32



TETRAPOTASSIUM PYROPHOSPHATE

This high efficiency builder for liquid detergents, soaps and cleaning compounds is soluble 210 parts in 100 parts water at 75° F. It exhibits exceptional synergistic, sequestering, water softening, dispersion and emulsifying properties. We pack it powdered or unground in 100 lb. lined bags and in 125 and 300 lb. drums. All Blockson jobbers warehouse it. Write for Technical Bulletin, sample.

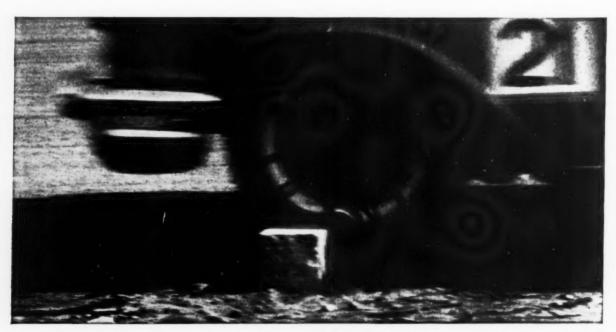




PROBLEM: When an oil-well drill passes through a heaving shale formation, shale and clay particles get into the drilling mud, causing it to thicken. Yet the viscosity of the mud must be kept low.

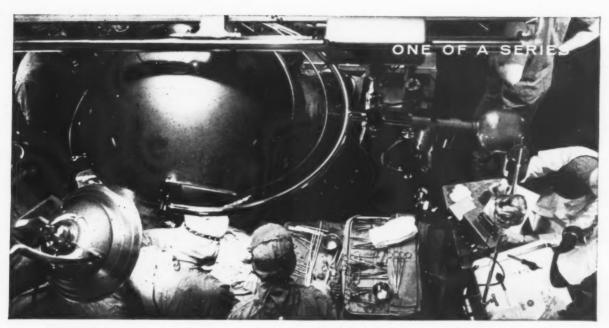
SOLUTION: The addition of Pluronic L61 or L62 to the drilling mud effectively controls the viscosity. The increased penetration and decreased bit wear result in cheaper and faster holes.

Can Pluronic, polyols give



PROBLEM: Rayon cords must have great strength and they do. Nevertheless, the rayon industry is constantly seeking to make tire cords even stronger and safer—for lives hang in the balance.

SOLUTION: Formulators have found that treating tire-cord grade cellulose pulp with a Pluronic polyol increases strength without cratering, helps prevent clogging of the spinnerette.



PROBLEM: During operations, a mechanical heart is sometimes used to function for the patient's heart and lungs. But the blood it pumps tends to foam, admitting bubbles into the bloodstream.

SOLUTION: Silicones effectively eliminate the foam, but they must be emulsified before use. Pluronic F-68 was chosen for this job because it has an unusually low order of toxicity.

your product new functions?

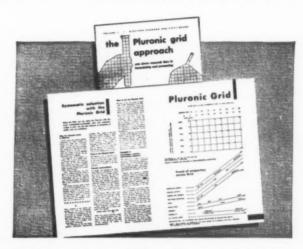
Sometimes these versatile chemicals can broaden the application of a product by eliminating an undesirable property, or by adding a desirable one. Some reasons:

The Pluronic polyols are a series of patented block-polymers that exhibit a wide variety of surface-active properties. The various grades range in physical form from mobile liquids and pastes to solids sufficiently hard to be flaked . . . all grades are 100% active.

The series has a molecular weight range of 1000 to over 11,000. The grades vary from materials that are almost water insoluble to materials that have no cloud point — even at the boiling point of water.

These pictures show three typical uses of the Pluronic polyols. Actually, over 100 different applications have been found so far, and the end is not in sight!

Chances are one or more of these properties could be used to advantage in either your present product or the new one you're developing. For samples, technical data, and your copy of the Pluronic Grid, why not write us today? Wyandotte Chemicals Corp., Dept. 784-S, Wyandotte, Mich. Offices in principal cities.



The famous Pluronic Grid provides a controlled, systematic method of product screening . . . minimizes costly random investigation and evaluation by establishing related property trends among the grades available.

Wyandotte CHEMICALS

MICHIGAN ALKALI DIVISION

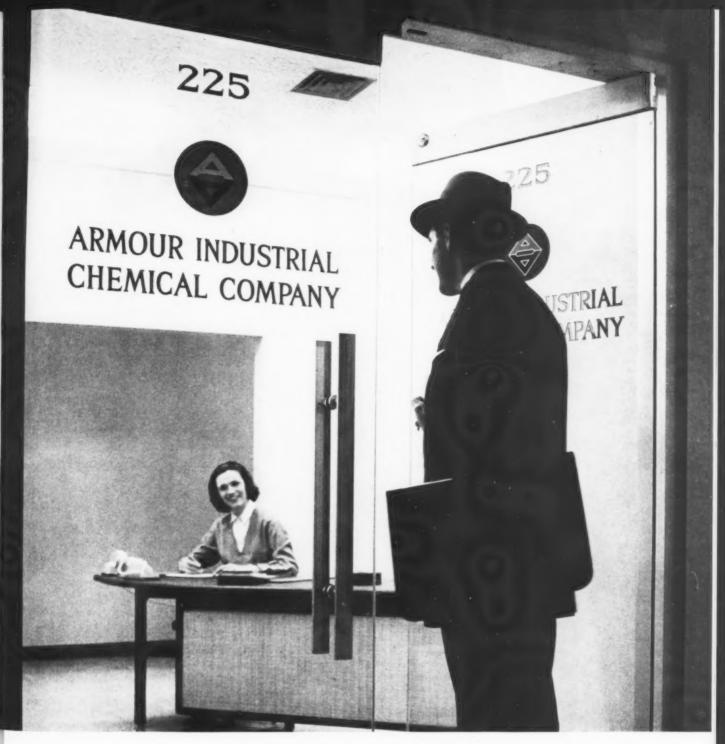
Pacing progress with creative chemistry

SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA • CALCIUM CARBONATE • CALCIUM CHLORIDE • CHLORINE • MURIATIC ACID • HYDROGEN • DRY ICE GLYCOLS • SYNTHETIC DETERGENTS • SODIUM CMC • ETHYLENE OXIDE • ETHYLENE DICHLORIDE • POLYETHYLENE GLYCOL • PROPYLENE OXIDE PROPYLENE DICHLORIDE • POLYPROPYLENE GLYCOL • DICHLORODIMETHYLHYDANTOIN • CHLORINATED SOLVENTS • OTHER ORGANIC AND INORGANIC CHEMICALS

HELIOTROPINES

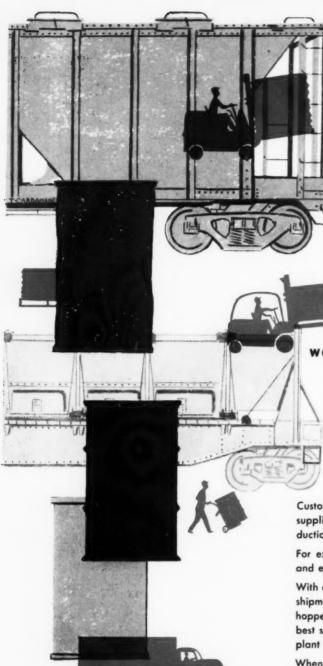
There are no finer...Shulton, the world's leading producer, has a heliotropine to suit your particular requirements. Perfume grade, setting the highest standard in odor quality; soap grade, combining fragrance excellence with fragrance economy; and technical grade, providing a chemical of highest purity for industrial applications. Then, too, if stability of color and odor are a problem in special alkaline situations, investigate Shulton's Heliotropine Liquid.

Technical data, samples, and additional information, available on request.



A new name on a new door. The Chemical Division and Ammonia Division of Armour have been combined to form the Armour Industrial Chemical Company. The new company specializes in Fatty Nitrogen Derivatives, a field pioneered by Armour; Fatty Acids, Anhydrous Ammonia and Industrial Oils. New offices are at 110 North Wacker Drive, Chicago 6, Illinois. The new telephone number is ANdover 3-5200.





Packaging flexibility!

it's just another way to say we save you time, trouble and money

Westvaco Phosphates

Customers profit by our experience and versatility as phosphate suppliers...our broadly diversified product line, multi-plant production and our ablility to accommodate special requirements.

For example, our flexibility in providing the most convenient and economical packaging.

With color-coded bags, reusable or disposable drums, unitized shipments on wooden or disposable pallets, semi-bulk bins and hopper cars, we can ship your phosphates in the way you find best suited to your purchasing, storage, inventory control, inplant handling and processing.

When standard packaging doesn't fill the bill, we're always ready to make modifications to meet your individual needs.

Your nearest Westvaco office will be glad to discuss your packaging requirements with you.

Disodium Phosphate | Hexaphos® | Fosfodril® | Sodaphos® | Monosodium Phosphate | Sodium Acid Pyrophosphate | Sodium Tripolyphosphate Tetrasodium Pyrophosphate Trisodium Phosphate Anhydrous Trisodium Phosphate Hemihydrate Trisodium Phosphate Monohydrate

POTASSIUM PHOSPHATES Dipotassium Phosphate Monopotassium Phosphate Potassium Tripolyphosphate Tetrapotassium Pyrophosphate Tripotassium Phosphate



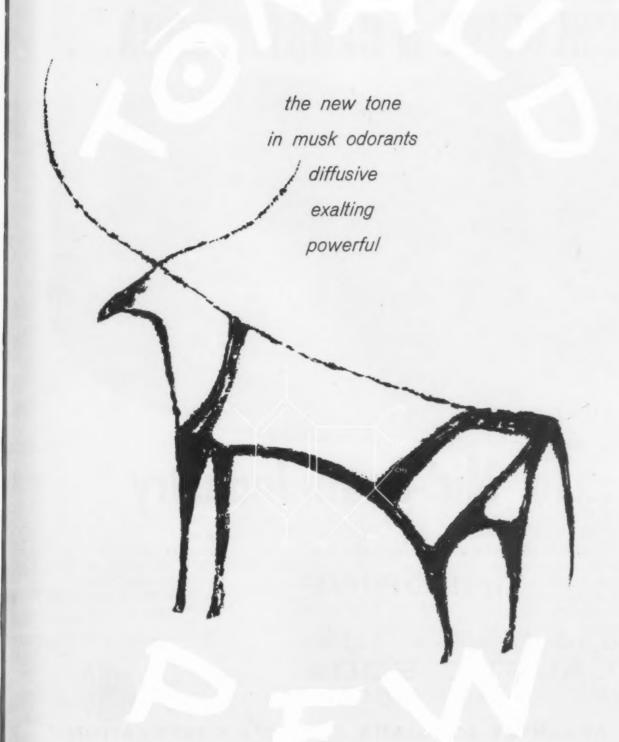
Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION

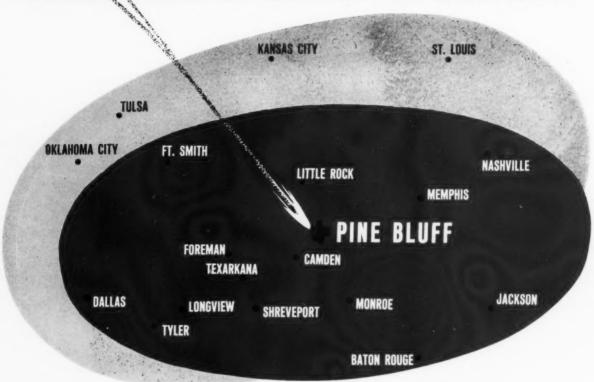
Westvaco Mineral Products Division

General Sales Offices:

161 E. 42nd STREET, NEW YORK 17



A Dependable Source OF CHLORINE & CAUSTIC SODA...



...for Mid-South Industry

Manufacturers and Marketers of

CHLORINE
Tank-Car Quantities Or One-Ton Containers

and 50% - 73% CAUSTIC SODA Plant: PINE BLUFF, ARK.

General Sales Office: SLATTERY BLDG. SHREVEPORT, LA.

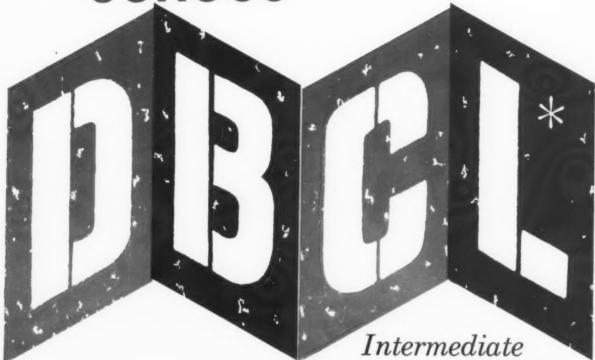
PHONE: 2-2141, Ext. 495



ARKANSAS LOUISIANA CHEMICAL CORPORATION

A SUBSIDIARY OF ARKANSAS LOUISIANA GAS COMPANY

NEW! CONOCO



ate polyglycol.

your letterhead.

for cationic detergents
now available in
commercial quantities from

CONTINENTAL OIL COMPANY

CONOCO DBCL (dodecylbenzyl chloride, technical grade) reacts with tertiary amines to form cationic surface-active agents—known chemically as "quaternary ammonium salts." Quaternaries are used as the active ingredients in sanitizer preparations, as textile softeners, and as antistatic agents for fibers, plastics, and paper. Nonionic surface-active agents may also be made by reacting CONOCO DBCL with the appropri-

*TYPICAL PHYSICAL PROPERTIES

Specific Gravity at 60°F	0.965
Apparent Molecular Weight	
Activity	Approx. 95%
Minimum Activity	90%
Flash Point (C.O.C.)	.355°F.
Viscosity S.U.S. at 100°F	105
Pour Point	Less than -5°C.



For chemicals with a head start on the future...count on CONOCO*!

CONTINENTAL OIL COMPANY, PETROCHEMICAL DEPARTMENT 1270 AVENUE OF THE AMERICAS, NEW YORK 20, NEW YORK

For samples and further information, just send a request on

SEPTEMBER, 1959

ALKANE

There is only one ALKANE*

ORONITE

In the field of detergent intermediates there is just one ALKANE. Often ALKANE is referred to as "the standard of quality" among detergent alkylates. ALKANE is a product of the Oronite Chemical Company, first produced in 1946.

If you use ALKANE you use the best "polypropylene benzene", "dodecylbenzene", "propylene tetramer benzene", "alkylbenzene", "detergent alkylate", "propylene tetramer alkylate", "alkylaryl compound". ALKANE is covered by two basic U.S. patents, Nos. 2,477,382 and 2,477,383 and is, today, by far the leading synthetic detergent raw material.

In the future, as in the past, you can expect ALKANE to remain the finest detergent raw material available.



ORONITE CHEMICAL COMPANY

A CALIFORNIA CHEMICAL COMPANY SUBSIDIARY

EXECUTIVE OFFICES - 200 Bush Street, San Francisco 20, California

SALES OFFICES - New York, Boston, Wilmington, Chicago, Cincinnati,
Cleveland, Houston, Los Angeles, San Francisco, Seattle

Foreign Affiliate: California Chemical International, Inc., San Francisco,

ALKANE

After Closing

Gaylord Western V.P.

Norman G. Gaylord has been named vice-president in charge of reasearch and develop-



Norman G. Gaylord

ment for the newly created polymer division of Western Petrochemical Corp., New York, it was announced recently by Maurycy Bloch, president. Dr. Gaylord was formerly assistant director of the organic chemistry department of Interchemical Corp. Previously he had been associated with E. I. du Pont de Nemours & Co.

The new division's basic aims are twofold, Dr. Gaylord declared: further development of existing wax products by application of polymer technology and creation of completely new and distinct polymers not necessarily based on wax.

Coulter Gulf Jobber

James Coulter, associated with the Gulf Oil Co., Pittsburgh, since 1930, and formerly chairman of the Automotive Specialties Division of the Chemical Specialties Manufacturers Association, has established the Coulter Tire & Supply Co., Rosslyn Road, Carnegie, Penna. The new Coulter company will act as a jobber for the Gulf

line of tires, batteries, and accessories servicing 60 dealers in the South Hills area of the Pittsburgh district.

Mr. Coulter became an emplovee of the Tire, Battery and Accessories Department of Gulf Oil in 1933 when the division was just getting started. Working through the purchasing, merchandising and pricing of automotive accessories, he eventually ended up in sales, working with suppliers in developing sales programs, catalog pages, etc. and being responsible for preparation and distribution of all Gulf price sheets in the field. He has been active in CSMA affairs since the founding of the Automotive Specialties Division 10 years ago until the time of his recent resignation from the Association.

John T. Stanley Dies

John T. Stanley, 55, secretary of John T. Stanley Co., New York soap manufacturers, died Sept. 2nd in a New York Hospital after a long illness. The company was founded by his grandfather in 1865.

Mr. Stanley was a director of Shulton, Inc., Clifton, N. J. He is survived by his widow, Mrs. Beulah Cooke Stanley, and a brother and sister.

SAACI Clinic Set

The Salesmen's Association of the American Chemical Industry will hold its eighth annual saleclinic Sept. 28, at the Roosevelt Hotel, New York. Keynote of the all-day clinic will be "The Changing Role of the Salesman—Yesterday, Today, and Tomorrow." The meeting will be highlighted by a panel discussion on this theme scheduled for the afternoon. Luncheon speaker will be Arno H. Johnson, vice-president and senior econ-

omist at J. Walter Thompson Co. advertising agency, who will give an address on "Setting our Sights for the Sixties." The morning's program consists of four talks.

Cannella In New Post

Leonard G. Cannella has been appointed products sales manager of non-food cans for Continental Can Co., New York, it was



Leonard G. Cannella

announced last month by R. S. Hatfield, general manager of sales for the metal division. Previously district sales manager for metal containers in New York, Mr. Cannella is succeeded in that post by T. V. Carley, who held the comparable position in Boston. In his new position, Mr. Cannella replaces John H. Wallace who was killed July 1st in the crash of a company plane near Marion, O., (see Soap and Chemical Specialties, July 1959, p. 21).

Lefcoe in Europe

Sylvan Lefcoe, president of Par Industries, Inc., Los Angeles, left Sept. 12 by air for Sweden, where he will work out marketing arrangements and exchange of formulation information with Klarre & Co., Stockholm. From Sweden Mr. Lefcoe will fly to Zurich, Switzerland, to call on aerosol equipment manufacturers. From there he will go to Paris and London, returning by air to the United States on Oct. 8. Mrs. Lefcoe, secretary-treasurer of Par, will ac-

company Mr. Lefcoe. They will travel in a jet plane on a $10\frac{1}{2}$ hour flight that crosses the North Pole.

New Peet-Grady Lab

Dr. Eugene Gerberg, president of Insect Control & Research, Inc., 1115 Rolling Road, Baltimore, 28, has announced the establishment of a new Peet-Grady Laboratory for testing household and industrial insecticides. The firm is engaged in general entomological and chemical consulting. At the present time, this is the only laboratory eqiupped with Peet-Grady chambers on the Atlantic seaboard and east of Ohio. Dr. Gerberg, prior to his service in the Sanitary Corps of the U.S. Army was associated with the U.S. Public Health Service.

In addition to operating an entomological laboratory, Dr. Gerberg has also established a modern biochemical laboratory in a new building at the Baltimore address. The laboratories are staffed by three chemists and one entomologist in addition to Dr. Gerberg, all Ph.Ds. Dr. Gerberg is also the president of the Cornell Chemical & Equipment Co., of Baltimore.

Quick Chemical Relocates

Quick Chemical Corp., insecticide manufacturers, announced a change of address last month to 116 West Illinois St., Chicago 10, Ill.

Hailer, Jr. Ungerer Rep.

Florin J. Hailer, Jr., has been appointed New England sales representative for Ungerer & Co., New York, according to an announcement by Kenneth J. Voorhees, president of Ungerer. Mr. Hailer succeeds the late Warren G. Kell, who represened Ungerer in New England for many years. Mr. Hailer is the son of Florey Hailer, Sr., formerly vice-president and director of purchases for Liggett Drug and widely known in the chemical and drug field. Mr. Hailer, Sr. retired last January.

Canadian Specialties Makers Meet Nov. 2-4

T HE second annual meeting and conference of the Canadian Manufacturers of Chemical Specialties Association will be held Nov. 2, 3, and 4 at the Royal York Hotel in Toronto, Canada. This year's convention chairman is G. H. Wood of G. H. Wood & Co., Toronto, vice-president of the association. The technical program is highlighted by a forum on pesticides. moderator of which will be W. S. McLeod, Canadian Department of Agriculture. Panelists will include: A. W. A. Brown, head of the department of zoology, University of Western Ontario, his subject: "Resistance;" E. Mastromatteo, division of industrial hygiene. Ontario Department of Health who will speak on "Health;" and Lloyd Roadhouse, scientific information section of the research branch, Canadian Department of Agriculture, on "Household Insecticides." Also included in this panel will be a speaker on "Industrial Insecticides," whose name is yet to be announced.

The first day of the convention, Monday, Nov. 2, will be devoted to board meetings and to meetings of the divisions which will plan programs for future meetings. C.M.C.S. is composed of six divisions: Aerosol; Automotive; Disinfectants and Sanitizers; Insecticide; Soap, Detergents and Sanitary Chemical Products; and Waxes and Floor Finishes. Monday evening the association will hold open house in its suite.

The annual meeting and nomination and election of officers are scheduled for the morning of Tuesday, Nov. 3. This will be followed by an address by the association president G. E. Flemming, Guardian Chemical and Equipment Co., who will outline the association's plans for 1960. The presidential address will be followed by a forum on tariffs, a subject much in the public eye at the moment. Tuesday's luncheon will

be followed by two concurrent sessions: a forum on pesticides with A. H. Carter of Green Cross Products. Montreal, in the chair and a forum on waxes and floor finishes under the chairmanship of R. S. Sweet, Success Wax, Ltd. Later in the afternoon of Nov. 3, a forum on aerosols and automotives will be held. Co-chairmen will be G. S. Lang of Connecticut Chemicals (Canada) Ltd., and H. G. Lederer, R. M. Hollingshead Corp., Camden, N.J. A joint forum on soaps and detergents, and disinfectants and sanitizers, scheduled to be held concurrently, will be under the chairmanship of G. H. Wood and R. L. Jones, Colgate-Palmolive Ltd. The day's events will conclude with a "Company Open House."

In the morning of Wednesday, Nov. 1, a talk on sales presentation will be given by a speaker, yet to be announced. The afternoon program of the third day features a joint forum on soaps and detergents, and disinfectants and sanitizers with G. H. Wood and R. L. Jones as co-chairmen. At the same time a forum on aerosols and pesticides will be held with A. H. Carter and G. S. Lang in the chair. Final technical forum of the meeting will be concerned with waxes and floor finishes, and automotives with G. V. Jansen of S. C. Johnson & Son, Ltd., Brantford, Ont., and H. G. Lederer as co-chairmen.

The convention will conclude with a cocktail party and banquet to be held in the evening of Wednesday, Nov. 4.

A full program has been arranged for ladies which will include a tour of Toronto and surroundings. Members of the Chemical Specialties Manufacturers Association will enjoy the same privileges as C.M.C.S. members. F. L. McCarthy, 7 Adelaide Street, West, Toronto 1, Ont., should be contacted for information and advance registration.

Detergent and Soap Sales at Record High

OMBINED sales of synthetic detergents and soaps in the first six months of 1959 hit a record high of 2,062,686,000 pounds, valued at \$526,142,000. Sales of detergents and soaps moved ahead of the 1958 figures by 4.9 per cent in tonnage and 6.2 per cent in value. The 1958 totals were 1,965,477,000 pounds and \$495,611,000. Liquid detergent sales, up 32.2 per cent in this year's first half continued

their spectacular rise according to the figures reported late in August by the Association of American Soap & Glycerine Producers, Inc.

While synthetic detergent sales continued to gain, sales of soap declined three per cent in tonnage and 4.5 per cent in dollar value from the first half of 1958. Total sales of synthetic detergents amounted to 1,540,602,000 pounds valued at \$372,996,000, an increase

of 7.9 and 6.9 per cent, respectively over the 1958 totals of 1,427,280,000 pounds and \$349,024,000.

Liquid synthetic detergent sales totalled 267,480,000 pounds and \$97,467,000, a rise of 32.2 per cent in quantity and 29.4 per cent in dollars from the corresponding six months of 1958. Packaged liquid syndets accounted for almost 240 million pounds of this total. Sales of powdered synthetics amounted to 1,273,122,000 pounds and \$275,529,000, a 3.9 per cent increase in tonnage and 0.7 per cent in value.

Total soap sales, both liquid and solid, declined to 522,084,000 pounds and \$153,146,000 from 583,197,000 pounds and \$146,587,000 in the first half of 1958.

Solid soaps accounted for 508,124,000 pounds of the above total. This figure includes 267,039,000 pounds of toilet soaps sold in the first half of 1959. In the face of a general decline in the soap market, toilet soap sales continue to climb, the latest figure representing an increase of 4.6 per cent over the comparable period last year.

Sales of scouring cleansers during the first half of 1959 amounted to 191,671,000 pounds valued at \$26,733,000. Since these products were included in the survey only at the beginning of this year no comparative statistics are available.

Synthetic detergents now account for 74.7 per cent of the combined soap and detergents market, compared with a 72.6 per cent share last year.

Detergent and Soap Sales—First Half of 1959 and 1958

		ands of	Thousands of dollars				
	1959	1958	1959	1958			
Detergents, solid	1,273,122	1,224,936	275,529	273,696			
Detergents, liquid	267,480	202,344	97,467	75,328			
Total	1.540.602	1.427.280	372,996	349,024			
Detergents, solid, other than							
shampoo, pkgd.	1,206,985	1,157,403	262,910	260,996			
Detergents, solid, other than							
shampoo, bulk	60,334	61,340	8,921	8,736			
Detergents, liquid, other than	00.040+	01.025	85 469	63,523			
shampoo, pkgd. Detergents, liquid, other than	29,946*	21,275*	85,469	53,323			
shampoo, bulk	2.623*	3.207*	3.117	3.831			
Detergent shampoos, liquid	6.928	6.488	8.881	7.974			
Detergent shampoos, solid	5.803	6.193	3,698	3,964			
Soaps, other than liquid	508,124	523.933	150.430	143.877			
Liquid soaps	1.745*	1.783*	2,716	2,710			
	*00.003	538.197	153.146	146.587			
Total	522,084 267,039	255.276	96 471	84,777			
Bar toilet soaps** Yellow & other than white	207,033	233,270	30,471	04,777			
laundry bars	26.819	19.399	2.617	2 354			
White laundry bars	52,235	61,515	11,547	12,519			
Soap chips and flakes, pkgd.	13.689	18,392	4,725	6,252			
Soap chips and flakes, bulk	38,608	40,575	4,201	4,875			
Soap, granulated, sprayed,							
bulk***	31,827	40,286	3,647	4,806			
Soap, granulated, sprayed,			10.500	10040			
pkgd.***	57,164	68,548	17,599	19,949			
Hand paste & powder, incl	4.400	F 010	762	755			
waterless hand cleaner	4.422	5,313	104	733			
Paste & jelly soaps (potash	6.281	6,387	888	929			
& other) Shaving soap (stick, powder,	0,201	0,007	000	200			
cake)	1.092	1.118	684	707			
Shaving cream (tube, jar, aerosol,							
soapless)	8,430	6,611	7,178	5,864			
Soap shampoo, liquid, pkgd.	30*	15*	108	99			
Liquid soap, other than pkgd.							
shampoo	1,715*	1,768*	2,608	2,611			
Miscellaneous or other soaps (incl							
shampoo creams, jellies, pastes.		513	111	90			
powders)	518	313	111	30			

*expressed in thousands of gallons **includes all toilet bars, medicated, synthetic, etc. ***includes washing powder

Macy's Appoints Garvey

John J. Garvey was recently appointed manager of the Long Island City, N. Y., drugs factory of Macy's, New York. Previously assistant division superintendent of the department store's seventh floor, Mr. Garvey has been with Macy's since 1954. Prior to that he was general manager and secretary of M. Argueso and Co., Mamaroneck, N. Y.

CSMA Lists Speakers

Four men connected with the chemical specialties business will address a general membership luncheon Sept. 15, during a twoday meeting of the board of governors of the Chemical Specialties Manufacturers Assn. The meeting and luncheon are being held at the Hotel St. Moritz, New York. Later the same day, (Sept. 15) a cocktail party and reception for CSMA members will be held in the Sky Gardens of the St. Moritz. There will be music and dancing. Women may attend. Price of the cocktail party is \$5.00 per person in advance; \$6.00 at the door.

The luncheon to be held during the board meeting, which takes place on Tuesday and Wednesday, Sept. 15 and 16, will hear brief reports on business and economic conditions overseas from four CSMA members who have just returned from abroad. Speakers include: Clarence F. Carter, president of Continental Filling Corp., Danville, Ill., George Branigan, Ungerer & Co., New York; Peter C. Reilly, Jr., Reilly Tar & Chemical Corp., Indianapolis, and John A. Rodda, Fairfield Chemical Division, Food Machinery & Chemical Corp., New York. Both Messrs. Branigan and Rodda made worldwide trips this past summer. Mr. Carter and Mr. Reilly recently visited Europe on business trips.

Price of the luncheon, which begins at 12:30 p.m., is \$10.00 per person in advance; \$11.00 if paid at the door.

A. E. Badertscher Retires

Amos Edison Badertscher, since June 1931 an entomologist and horticulturist in charge of the insecticide department of McCormick & Co., Baltimore, and more recently a consultant, retired August 1. Mr. Badertscher served for several years as chairman of the Insecticide Scientific Committee of the Chemical Specialties Manufacturers Assn., during the period when the Official Test Insecticide (O.T.L.) was developed and

adopted. During World War II, he served on the advisory committees for the War Production Board and the Surgeon General's office, particularly in production of louse powder and other insecticides for military personnel. While with McCormick, Mr. Badertscher was a member of the firm's factory, junior and senior boards of directors.

In 1928 and 1929 Mr. Badertscher did graduate work in entomology at Ohio State University. From June 1, 1929 to June 1, 1931, he held a fellowship on pyrethrum and rotenone, sponsored by McCormick & Co., in the entomology department of the graduate school of Rutgers University.

James Bourke Dies

James J. Bourke, 84, an auditor for Pacific Soap Co., Los Angeles, for the past 38 years, died in that city on July 30th. Mr. Bourke is survived by his wife, Amanda, and a son, Desmond.

Soap Ass'n. Board Changes

William H. Burkhart, chairman of the board of Lever Brothers Co., and F. B. Patton, vice-president of Armour and Co., tendered their resignations as directors of the Association of American Soap & Gycerine Producers, Inc. The resignations were received at the last board of directors meeting of AASGP. To fill the resulting vacancies the board elected Milton G. Mumford, president of Lever Brothers Co., and J. M. Hoerner. general manager, Grocery Products Division of Armour and Company. Ralph A. Hart, executive vicepresident of Colgate-Palmolive Co., was elected AASGP vice-president of the East, succeeding Mr. Burkhart in that capacity.

A nominating committee was named by the board to prepare the slate of directors to be presented at the annual meeting next January. Chairman of the committee is A. W. Schubert of Emery Industries, Inc. Members include: Ralph A. Hart of Colgate-Palmolive Co.; T. G. Hughes, Oronite

Aerosol Contest Changes

Changes in the rules governing the judging of products entered in the eighth annual Aerosol Package Contest sponsored by the Chemical Specialties Manufacturers Assn., were announced late in August by Frederick G. Lodes. Lodes Aerosol Consultants. Inc., New York, chairman of the Aerosol Package Awards Committee. The rule which required all products to be adequately labeled and in compliance with laws and regulations has been dropped. This rule also called for CSMA's Precautionary Labeling Committee to review entries for label compliance prior to judging. Instead the committee has approved a change in rule 1. which emphasizes that the judging is made on the basis of "general sales appeal of the complete package." Rule 1 continues: "The awards are given for package design only and do not constitute an endorsement or approval of the product, container, valve, label or any other part of the package, nor does it constitute a determination that the package or labeling meets any of the applicable state or federal laws or regulations."

Another change in the rules advances the date entries may be submitted by two weeks to Sept. 1. Closing date for entries is Oct. 15.

Another change in the rules was made for the sake of clarity. Rule 4 now reads "Send one completed entry blank for each package entered. Additional entry blanks will be sent promptly on request. Do not send counter displays, setup boxes, literature, etc." The rule previously read: "Only one entry may be made by any marketer or brand owner in any one class, but entries may be made in as many classes as desired by each."

This year, as in the past, there will be awards in 11 product classes and a best of show.

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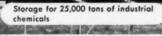
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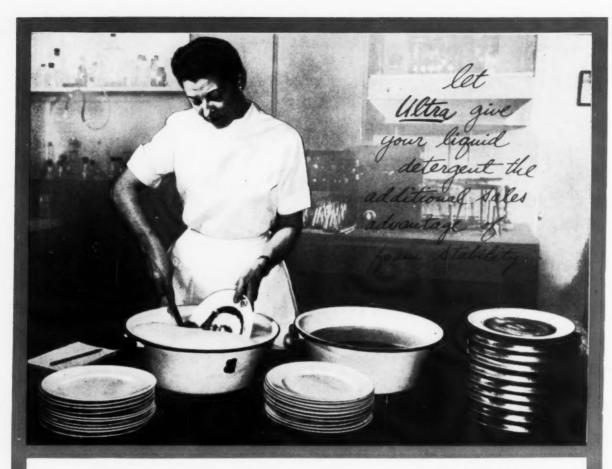
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Specialties FROM HAARMANN & REIMER



LILAC 9830 W.O.J. For many years a world renowned Lilac. Now offered in its original form in a colorless type. One of the most outstanding raw materials at the disposal of the perfumer. For creams, perfumes, lotions. Ask for samples and prices — you will be delighted with the result.

NEROFLOR EXTRA To produce the odor value of Oil Neroli Bigarade Petale. Has a pronounced flowery odor and a heady fixative base note characteristic of so many natural flower oils. Try it in Eau de Cologne and to modify Neroli, Orange Blossom, Jasmin, Gardenia, Tuberose, and Sweet Pea.

NEROFLOR SAVON Possesses the same merits — stable in soaps, recommended for low priced purposes.

MUGOFLOR A new chemical with remarkable blending qualities of great value to the perfume compounder. This product has had unusual and enthusiastic acceptance. Of true Muguet quality, it is a marvelous blending agent. Tenacious, intense, yet of fine floral character. Non-discoloring.

AGRUMEN ALDEHYDE Refines the fresh green note, and also the characteristic note common to all Citrus Oils. A most interesting modifier for Eau de Cologne, Bergamot artificial, or to add lift and refinement to the top note of many perfumes.

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TRISODIUM PHOSPHATE
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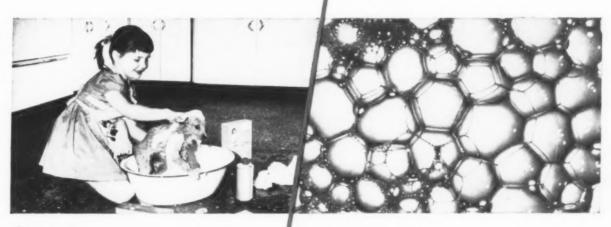
TETRASODIUM PYROPHOSPHATE
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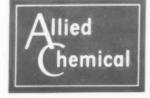


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"turn on" more detergent sales with DEMA liquid controllers!



Stainless steel construction makes this Dema proportioner adaptable to a variety of products. Single push-button operation with anti back-siphoning feature. Attaches to faucet, connects to bulk container thru polyvinyl tube, gives perfectly proportioned mixture. Resets automatically to clear water.

MODEL #183: Fixed Proportion MODEL #184: Adjustable Proportion

Here's a real heavyduty aluminum alloy and stainless steel dispenser designed for waterless hand cleaners and protective creams. Holds factoryfilled disposable slip cover cans of any depth. Self-priming, self-lubricating suction pump is pushbutton operated. No gears or levers to get out of order.



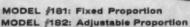
MODEL #310-4: 4¼" Outside Diameter Cans MODEL #310-5: 5%" Outside Diameter Cans MODEL #310-6: 6" Outside Diameter Cans



This precision-built, manually-controlled proportioner attaches easily to any faucet. Draws liquid detergent thru a polyvinyl tube, meters it adjustably and gives you pushbutton selection of proportioned mixture or clear water. Brass constructed with chromium finish.

MODEL #167: Adjustable Proportion

A stainless steel constructed automatic liquid controller suitable for a variety of products. Single pushbutton operation. Attaches to faucet, draws liquid concentrate from any size container, dispenses it accurately in any desired proportion. Resets automatically to clear water.







DEMA

ENGINEERING COMPANY

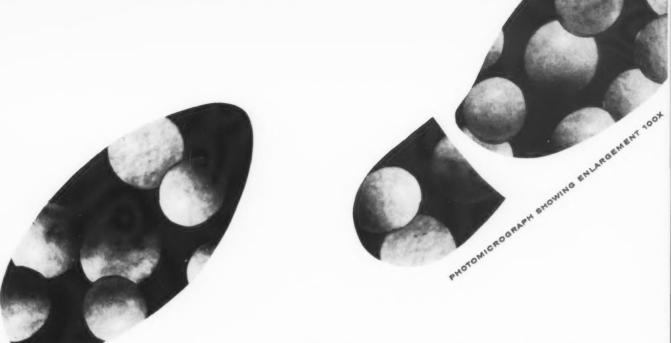
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MODEL #301



start one step closer to better detergent mixtures with $Nacconol\ DBX$

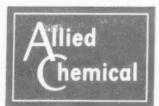
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NACCONOL DBX is a 40% active spray-dried alkyl aryl sulfonate . . . as dense as most flake materials.

By eliminating the need for grinding flakes, it gives you more uniform mixtures, with little or no striation . . . faster . . . and in a simple rotary tumbler.

RESULT? more salable product that looks better and works better. Production costs are lowered . . . without increasing material costs!

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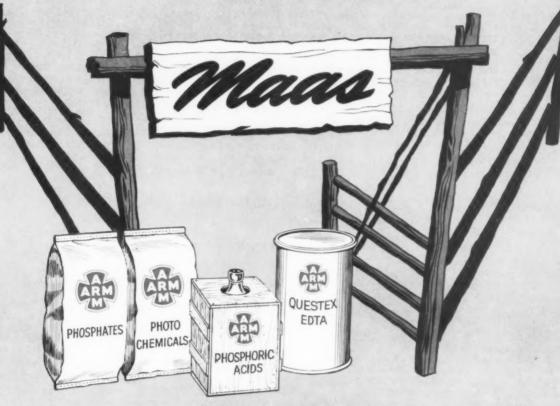
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QUESTEX (EDTA)



A. R. MAAS CHEMICAL CO. Division of Victor Chemical Works

General Offices: South Gate, California Plants: Richmond and South Gate, California

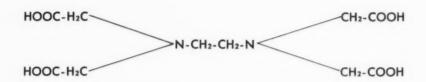


Turn Page for QUESTEX (EDTA) facts



VICTOR

QUESTEX° EDTA FACTS



ETHYLENEDIAMINE TETRA-ACETIC ACID AND DERIVATIVES

QUESTEX is recommended where heat and time stable, soluble metal complexes are beneficial; where deterioration from trace metals must be avoided and where scale and sludge must be prevented or removed. QUESTEX (EDTA) chelants have changed the whole water chemistry of such ions as calcium, magnesium, copper and iron, and offer a new approach to problems in detergency, polymerization, chemical processing and product stabilization.

At suitable pH Bi and trivalent cations are so firmly bound within the QUESTEX structure that for all practical purposes they are completely removed from solution. Preferential chelation is also possible as metallic cations with high stability constants such as Fe+++ will form complexes before metals with lower stabilities such as Cu++ or Ca++. In some systems selective impurity precipitation can be accomplished by simple pH adjustment.

To help you select the QUESTEX chelant most suitable for your purpose we offer the following table of properties:

QUESTEX [®]	4H EDTA Acid ANHYDROUS	4SW 4-SODIUM SALT 4H ₂ O CRYSTAL	4S 4-SODIUM SALT ANHYDROUS	2SW 2-SODIUM SALT 2H ₂ O CRYSTAL
Molecular Weight	292.25	452.25	380.20	372.20
Typical Assay	99.5%	100.3%	96.5%	100.0%
EDTA 4H Equivalent	99.5%	64.8%	74.2%	78.5%
Practical Solubility 25°C to 90°C — grams per 100g added H ₂ O	0.1-0.4 g.	51-63.5 g.	44·54 g.	6-20 g.
Milligrams CaCo ₃ chelated per gram at pH 8.	340 mg.	220 mg.	255 mg.	270 mg.
Quantity to chelate one pound CaCo ₃	2.94 lb.	4.55 lb.	3.92 lb.	3.73 lb.

Unlike water treatments used in the past, QUESTEX offers an economic advantage in some processes where recovery and recycling make it possible to use the chelant over and over again. Effectiveness of cleaning compounds is usually enhanced when QUESTEX is combined with phosphates. The values of wetting agents and sanitizers, such as quaternary ammoniums, are greatly increased by QUESTEX additions.

Many users of EDTA find the uniformly high assay of QUESTEX offers greater economy. If you do not yet use EDTA chelants, you'll find it worth while to investigate these interesting and versatile new chemicals.

More information is available on request. Let's discuss your application — we'll be glad to work with you.

"Phosfacts-Ortho" and "Phosfacts-Poly" data sheets on sodium phosphates are also yours for the asking.



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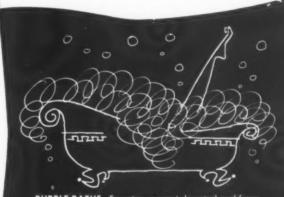
Here's How the remarkable SOLUBILIZING Action of AEROSOL® 22 Surface Active Agent Improves:



LIQUID DETERGENTS — You can increase the tolerance of your liquid formulations to effective inorganic builders — yet keep organic surfactants safely in solution. The solubilizing action of ARROSOL 22 will keep other detergents, foamers, germicides or colorants in clear solutions that will not gel. Light and heavy-duty liquids will work better in a variety of difficult conditions.



SHAMPOOS—AEROSOL 22 itself is an excellent shampoo base, providing good foaming properties and gentle detergent action. It imparts excellent rinsability in all waters. The solubilizing action means you can incorporate oils and perfumes without the need for alcohol or special solvents. As a shampoo additive, AEROSOL 22 can contribute these properties to present formulations.

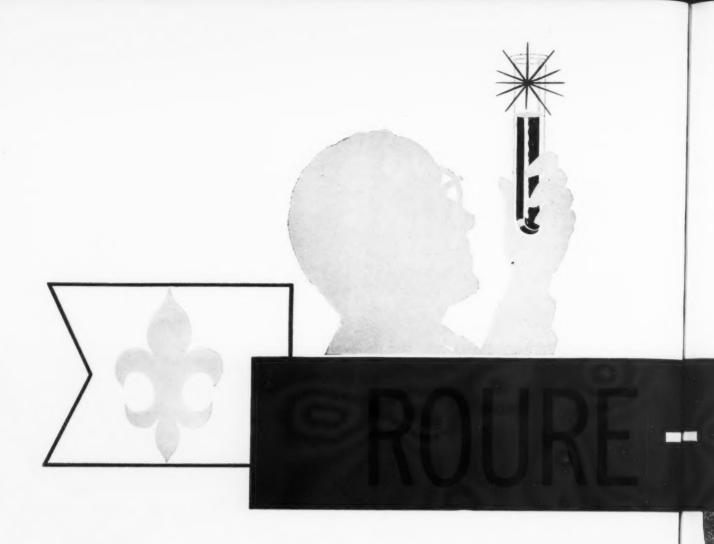


BUBBLE BATHS—Foaming power is boosted and foam stability is greatly improved by small percentages of AEROSOL 22. The solubilizing properties permit wide latitude in the formulation of surfactants, perfumes and colorants—and insure top effectiveness even in hard water.

A DISTINCTIVE MOLECULE accounts for the unusual properties of AEROSOL 22 Surface Active Agent. A long-chain hydrocarbon supplements the action of 5 hydrophilic centers. THE DISTINCTIVE PERFORMANCE of AEROSOL 22 in your own formulation will be easy to evaluate — if you will just make use of the coupon — now!



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Roure-Bertrand Fils, Grasse, and Justin Dupont, Argenteuil, France, as well as their facilities in North Africa, India, the Far East and South America, have for decades been prime processors of basic ingredients for the perfumers of the world.

Their creative genius is attested by the many proven international successes in the field of fragrance requirements . . . be it in the development of original perfumes, colognes, aerosols, cosmetics, soaps and other toiletries . . . or in the masking area where odors have to be covered rather than developed.

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Unique
new surfactant
may be used in
acids, alkalies, electrolytes,
strong oxidants

Dowfax® 2A1, a new surfactant with a completely new chemical structure, can accomplish many jobs more general type detergents cannot. This is because of its unusual combination of properties. For instance, this detergent is soluble in concentrated electrolytes. It has excellent detergency powers. It also is the only anionic surfactant with outstanding coupling properties.

These facts indicate that Dowfax 2A1 can be used in light and heavy duty detergents. Its medium foaming action means it can be adjusted in formulations to yield high or low foaming characteristics.

Dowfax 2A1 is Dow alkyl diphenyloxide disulfonate, a new type of detergent. Commercial quantities of this product are available from Dow. Technical literature and experimental samples are immediately available. The Dow Chemical Company, Midland, Michigan, Technical Service & Development Department 502ER9.

... in brief

as the editor sees it . . .

NEW HIGH Sales of soaps and detergents hit a new high in the first six months of 1959. According to the figures of the Soap Association, they totaled well over two billion pounds for the half year. The most startling increase, once again, was staged by liquid detergents which shot up 33 per cent above the figures for the first half of 1958. Sales of liquids continue to amaze the detergent world.

Even taking into consideration that the term, "liquid detergent," includes such products as "Lestoil," "Mr. Clean," "Handy Andy" and others of the same type, one wonders where all the liquids are being used, and what if anything, they are displacing. Not detergent powders, certainly, since these moved up 7.9 per cent in tonnage during the first half of 1959. Possibly the liquid "all-purpose" products are carving a niche of their own among new cleaning chores, or more probably, doing older ones much more frequently than before. But whether liquids or powders, sales continue to mount, reflecting with unusual accuracy the current robust economy of the nation.

STEEL STRIKE Even if the steel strike,—in its seventh week at this writing—, were to end tomorrow, which seems extremely unlikely, its effect on makers of chemical specialties, synthetic detergents, and the like, will be felt for a long time. Where the strike will pinch the specialties maker most sharply is in his supply of metal cans, pails and drums, all of which he uses in large quantities and which are vital to his operation. Since the strike was so well advertised in advance, chemical specialties makers stocked up heavily on steel containers. Warehouses and plants we have visited were bulging with steel shipping containers early in the strike. Manufacturers tell us they

took on additional space to store extra inventories of cans, pails and drums in anticipation of the strike.

As the walkout continues, however, specialties makers are becoming increasingly anxious about their container supplies, and are beginning to look around for substitutes. All of which makes an ideal climate for the growth of newer replacements for steel containers. Plastic containers particularly, are finding increasing acceptance for packaging specialties. And while production of aluminum cans is just getting under way, these too represent a future threat to conventional steel containers. It could be that constantly rising prices and prolonged work stoppages will dig steel's grave as a container packaging material.

* * * * *

DILEMMA.... The question of removing the exemption of foods, drugs and cosmetics from the Household Hazardous Substances Bill (S. 1283), or letting it remain and amending the Federal Food, Drug, and Cosmetic Act of 1938 to include precautionary labeling was the dilemma which probably snagged a vote on the bill at this session of Congress. The Senate Bill, on which hearings were held in Washington last month, and its counterpart in the House of Representatives (HB 5260), with a few minor changes, had the unanimous support of industry as represented by such trade associations as CSMA, MCA, AASGP, TGA, and others.

All seemed to be sweetness and light until the FDA Commissioner popped up and protested that with the repeal of the Caustic Poisons Act in favor of the hazardous substances bill, FDA would have no clear authority over food, drug and cosmetic labeling. FDA feels this is essen-



LOOK at the sales advantages offered your product by G-11°

The market for products containing G-11 is an established, growing market with virtually unlimited opportunities for profitable development.

Few products have ever been studied so exhaustively and given such unanimous acclaim by authorities. G-11 is recognized as the proven, effective and non-irritating antiseptic chemical that offers outstanding hygienic and deodorizing advantages.

Years of safe, successful use by millions of people assure the continued success of your products containing G-11.

As the originator and producer of G-11, Sindar offers you the benefits of its scientific knowledge, practical marketing experience and technical service in using it to the best advantage in your soaps, detergents and cosmetics.

(Brand of Hexachlorophene)

Bulletins are available on:
Physical and Chemical Properties
Toxicological Properties
Bacteriological Properties
Cosmetic Use
Soap and Detergent Use
Literary Abstracts



tial, particularly in the case of pressure packaged cosmetics and toiletries.

So, after literatlly years of labor to come up with a bill that meets with the approval of widely disparate groups and interests, the hard-working Precautionary Labeling Committee of CSMA will have to continue the struggle. But the end is in sight. Lest any of those connected with the effort of writing a good bill become discouraged, let them remember how important it is that the Federal law, when passed, be a good one. After all, it will be the model for a host of state and possibly some municipal laws of critical significance to marketers of chemical specialties.

MAINTENANCE . . . Demand for chemical products for maintenance and sanitation has been extremely good so far this year. Most manufacturers' plants have been running at capacity or close to it. And from the looks of things, this activity could continue. We believe that two factors are primarily responsible. First, the great amount of new building, new factories, new apartments, new office buildings, new everything. The tendency is to keep new buildings cleaner than old ones, and to use more materials in so doing. Second, the forward march of cleanliness and sanitation. More people are using more products to keep present structures clean and sanitary. Maybe, it's education; maybe it's economics, but something is doing it.

Now that general conditions are rosy and demand for maintenance materials is active, it's all to the good. But there inevitably comes a day when the reverse may be true and it seems that the first things to get their throats cut in any wave of economy are maintenance and sanitation. It reveals that in the minds of too many executives, sanitation is still something of a frill, nice, but not wholly necessary. And it is this thinking that maintenance chemical suppliers have got to change. For it is this thinking which hits them right in the solar plexus when a slump comes. We feel it should be the basis for a wide, long-range educational program, one which starts now while manufacturers themselves are willing and able to spend the money. The Soap Association has done a good educational job in its own field for some years. But this job should

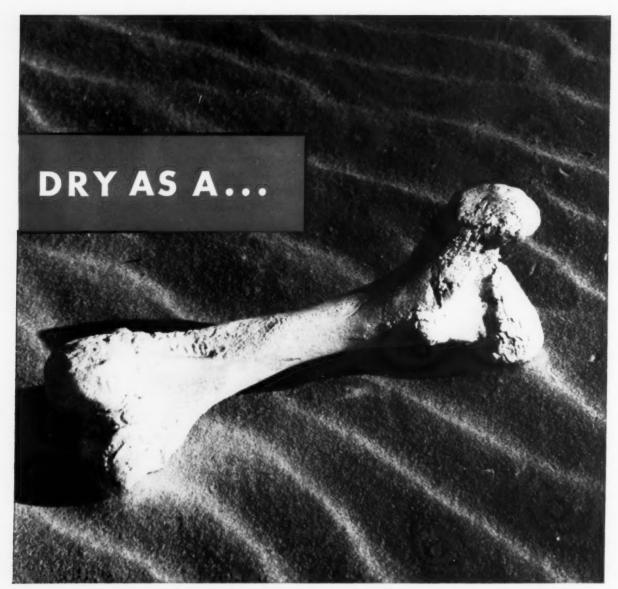
be broader, maybe a combined effort of a half-dozen trade groups.

PYRETHRUM.... Insecticides containing pyrethrins are going to cost more next year. Refiners, notified earlier by the growers, announced late last month that formulators would have to pay about four per cent more for their pyrethrins than a year ago. The increase, say the refiners, reflects the increased cost of their raw material.

Three reasons are advanced for higher pyrethrum prices: (1.) A program has been established to pay the growers more for their flowers; (2.) more money is being spent on research to develop flowers having a higher yield; and (3.) the Pyrethrum Board is spending more money on a public relations program on behalf of pyrethrum and insecticides based on it. These expenditures more than offset any price reductions that might be expected based on increased acreage.

The strong comeback of insecticides formulated with pyrethrins is based on several factors. Among them are greater consciousness of toxicity hazards; growth of insect resistance to some insecticides; growth of household insecticide use, stimulated by aerosols, and better economic conditions. Under the circumstances it's hard to see what else the formulator can do but accept the fact that he'll have to pay more for his extract and pass the cost along to his customer.

DEGREES . . . To be a pest control operator in Louisiana, according to a law recently passed, the operator must have a university degree in entomology. Hereafter, the bugs and rodents of that state will pass to eternity only at the hands of well-educated people. No longer can a fellow learn the business in the school of hard knocks and then set up his own establishment. He's got to be educated in book learning. He may know insect and rodent extermination from the ground up, but if he doesn't have that old B. S., he's out. Next thing we know, some state is liable to make a Ph.D. mandatory. Off hand, it looks to us like somebody in Louisiana is out to make the pest control business in that state a real closed corporation.



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Versatile Enjay Isopropyl Alcohol...employed in the formulation of rubbing compounds, antiseptics, cleaning agents and for general external use... is now available in an anhydrous grade as well as in 91% and 95% concentrations.

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as the reader sees it . . .

No Wax Claims

Editors

I enjoyed your editorial comment in the July issue of Soa's & Chemical Specialties on the current "no 'need to wax" claims of automobile manufacturers and I agree with you wholeheartedly.

Personally, I feel this may well resolve into the same sort of thing as the "no need to wax vinyl tile" claims when they first came out several years back. I agree that the Wax Division (Waxes and Floor Finishes Division of the Chemical Specialties Manufacturers Association) should publicize the polish manufacturers' side of this story.

> Thomas H. Reilly, Fluid Market Development. Silicone Products Department, General Electric Co., Waterford, N.Y.

Mr. Reilly also sent us a marketing research memo which summarizes his findings on the effect of nete car finishes on the automobile polish market He will supply copies to interested parties. Ed.

Appreciates Us . . .

Editor:

Your magazine Soap & Chemical Specialties is certainly appreciated and we find it very beneficial in informing us of new products, methods and general all around interest.

> Ralph Lemorande, Vice-president. Beam Chemical Co. Oconto Falls, Wisc.

Spanish Soaper Seeks Aid Editor:

As you may know, the Spanish government, following the admission of Spain to the O. E. C. E. (European Common Market), has just authorized the investment of foreign capital in Spanish industrial plants. This step provides manufacturers in the United States

with an excellent opportunity to expand their business in Spain and makes it possible for Spanish firms to replace old machinery and equipment and to expand their industrial activities into the progressive European economic community. Therefore, personally, I would be interested in establishing a commercial contact with firms in the soap, detergent or chemical specialties manufacturing fields which might be willing to invest in my soap business on some mutually agreeable basis.

I am associated with my brother in the soap business. We make bar soap, powdered soap and soap flakes for use in washing machines, in addition to detergents. I am general manager and chief executive officer, and my brother is in charge of manufacturing and production operations. We are young fellows, eager to work hard, and desirous of making our busi-

ness successful. Our factory is strategically located in Javita (Valencia), and this city happens to be the key to an important line of towns, all of which are closely linked to Javita.

> Gabriel Bacete Llacer Reina, 52 Iavita (Valencia), Spain

Spray Polish Source

Editors

May we enquire about the source of information regarding the spray shoe polishes which appeared on page 225 of the May issue of Soap & Chemical Special-

As makers of "Super Hartolan" we are naturally very interested in these formulations.

E. S. Lower, Director. Croda, Ltd. Snaith, Goole, Yorkshire, England

These formulas were contained in a technical bulletin

(Turn to Page 209)

John H. Breck, fourth from left, founder and chairman of John H. Breck, Inc., Springfield, Mass., maker of shampoos and hair preparations, recently was honored by Breck employees on the occasion of his 82nd birthday. To mark the event, informal parties were held in the company's Springfield offices and West Springfield plant. Mr. Breck is shown at party held in his office at Breck's West Springfield plant.







WITCO COSMETIC-GRADE STEARATES

Witco's cosmetic-grade stearates are widely used to improve adhesion and water-repellency of powders, cold creams, facial creams and ointments...as gelling and emulsifying agents for creams and shampoos...as agents to increase bulk and oil-absorption of cosmetic powders. Witco cosmetic-grade stearates are manufactured to T.G.A. standards.

Add sales appeal to **your** cosmetic products with the following Witco stearates:
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WITCO COSMETIC-GRADE SURFACTANTS

Witco's Emulsol® cosmetic-grade emulsifiers, opacifiers and wetting agents, upgrade your products...give them the performance-plus that leads to repeat sales every time.

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EMCOL 61 - hair conditioners

EMCOLS MST, CA and MS – glycerol monostearates EMCOL PS-50 – propylene glycol monostearates EMCOL RDC-D – diethylene glycol laurate EMCOL CAD – diethylene glycol stearate EMCOL DOS – diethylene glycol oleate EMCOL H-38A, EMCOL H-31A, EMCOL H-35A – polyethylene glycol esters – laurate, oleate, stearate



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Detergents... Cleansers...

Soaps

Introduction of a predetermined amount of oil of cedarwood into perfume mixing tank in plant of Procter & Gamble Co., Cincinnati. Essential oil is pumped from drum until weight of hand truck and drum have been decreased by correct amount as indicated by scale at right. See article on analyzing soap perfuming materials on page 57.

Aerosols Detergents Dishwashing Compounds Floor scrubs Glycerine Hand cleaners Laundry soaps Liquid soaps Metal cleaners Potash soaps Scouring cleansers Shampoos Shave products Soap powders Starch Steam cleaners Medicinal soaps Textile detergents **Toiletries** Toilet soaps

and other detergent and soap products



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FOR EVERY **FORMULATION**

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A neutral synthetic detergent and wetting agent whose active ingredient is mainly sodium alkyl sulphate. Excellent sudsing, wetting, dispersing and penetrating properties. Ideal for paste and liquid shampoos, bubble baths, liquid detergents, liquid car washes, liquid floor cleaners, in-secticides, glass cleaners, rug and upholstery cleaners.



A neutral nonionic synthetic detergent of the 100% alkyl-phenol ethylene oxide condensate type. A light-colored liquid with a clean, pleasant odor. Its superior detergent, wetting and emulsifying properties offer excellent performance in liquid detergents, sanitizer detergents, self-emulsifying solvents, laundry detergents, glass, textile and dairy cleaners, insecticides, and bottle washing compounds.



AMBER GRANULES

A neutral 88%, 42°C titer type soap of outstanding purity and uniformity. Well suited for the preparation of paste or gel-like products because of its high titer. Its granular form makes it ideal for powdered products. Excel-lent for the compounding of hand cleaners, paste cleaners, polishes, lubricants and coatings.



A neutral synthetic detergent, wetting and emulsifying agent of the 40% active sodium alkyl aryl sulphonate type. A white spray-dried product that can be used effectively in the blending of bubble baths, car washes, dishwashing compounds, dairy cleaners, insecticides, laundry detergents, rug and upholstery



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A medium titer, neutral spraydried white soap of exceptional purity and quality. Well suited for compounding products where a mild but effective soap is required-hand soaps, polishes, protective creams, dishwashing compounds and paper coatings.



A specially developed synthetic detergent whose active ingredient is mainly modified sodium alkyl sulfate. Offers exceptional efficiency and stability over a wide range of operating condi-tions. Its excellent wetting, penetrating, sudsing, dispersing and emulsifying properties make it well suited for the preparation of liquid shampoos, bubble baths, liquid detergents, liquid floor cleaners, insecticides, car washes, emulsion cleaners.

Procter & Gamble will gladly supply you with information on how you can save time and money when you formulate with Procter & Gamble products. You can also get technical help in connection with their use by writing to:



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K LIQUID

A modified, highly concentrated ammonium lauryl sulphate modified for increased sudsing and mildness. Exceptionally low cloud and pour points. Highly fluid and easy to handle. Ideal for clear liquid shampoos and liquid detergents where high foaming is required.

Problems presented by

Syndets in Water Supplies

By Jesse M. Cohen*,

Robert A. Taft Sanitary Engineering Center
U. S. Public Health Service
Cincinnati, O.

HE development of petrochemicals for household and industrial uses has undergone tremendous expansion and diversification during the past 20 years. Leading this burgeoning market are synthetic detergents. Derived from crude oil, they emerged about 20-25 years ago as a poor competitor for soaps, which are produced from vegetable and animal fats and oils. The challenge of synthetic detergents to soap supremacy as a cleansing agent began on a very modest scale. In 1939, sales of soaps totaled 3.3 billion pounds, compared to a sales total of synthetic detergents of only 18 million pounds, as illustrated in Figure 1. (1) (2) This beachhead was to advance steadily into a full-scale invasion of the detergent market. Ten years later, in 1949, soap sales totaled about three billion (2.96) pounds while total synthetic detergent sales, although still far behind, had expanded to 815 million pounds. In 1953, for the first time, total sales of synthetic detergents surpassed those of soap products. Today synthetics comprise 75 per cent of all detergent sales with a total of 3.8 billion pounds. Eighty-five to ninety percent of this impressive total is sold to the household market.

Synthetic household detergents are mixtures of at least three and sometimes as many as 10 individual components, each of which

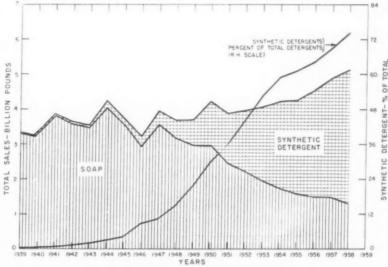


Figure 1. Soap and synthetic detergent sales

plays a specific part in the washing process. The one essential ingredient common to all is the surface active agent, often referred to as the "surfactant" portion. Supplementary compounds, generally referred to as "builders," include polyphosphates, sodium silicates, sodium sulfate, and sodium carboxy methyl cellulose. Other constituents, such as foam stabilizers, perfumes, and optical bleaches are usually added in minor amounts. Some typical formulations are shown in Figure 2.

Although soaps perform well in warm, soft water, they form insoluble calcium and magnesium

Figure 2. Examples of household synthetic detergent formulations

	A	В	C	D
COMPONENT	AMOUNT - PERCENT			
ALKYL ARYL SULFONATE	9	18	8	31
ALKYL SULFATE	9	-	22	-
SODIUM POLYPHOSPHATES	50	47	-	-
SODIUM SILICATE	7	7	-	-
SODIUM SULFATE	18	23	63	62
MOISTURE	5	3	5	5
OTHER COMPOUNDS	2	2	2	2

^{*}Paper presented at the annual meeting of the American Society of Sanitary Engineering, July 1959, Washington, D. C.

	HYDROPHILIC PORTION	HYDROPHOBIC PORTION
TYPICAL	[No] ⁺	[OOC-CH ₂ -CH ₂ CH ₂ CH ₃]
TYPICAL	[Na] ⁺	о о о о о о о о о о о о о о о о о о о
TYPICAL	[c1]	N-CH2CH2CH2CH3
TYPICAL	но (сн ₂ сн ₂ о), ос	-сн ₂ сн ₂ сн ₂ сн ₃

Figure 3. Structure of a typical surfactant.

salts which lack cleansing properties and cause deposits on plumbing fixtures and appliances. Soaps also lose cleansing activity in acid waters. To overcome these difficulties, chemists have created entirely new substances the molecules of which are enough like those of soap to have essentially the same cleansing properties, but different enough to be immune to the effects of acids or hard water.

Synthetic detergents are divided into three groups: anionic, cationic, and nonionic compounds. When soaps and most of the synthetic detergents are dissolved in water, their molecules split into two electrically charged parts, or ions. These ions consist of a large organic group which is hydrophobic, that is, relatively insoluble in water, and a smaller inorganic group which is hydrophilic, or soluble in water. This hydrostructure is phobic-hydrophilic characteristic of all synthetic detergents. The various classes of synthetic detergents, including soap, are illustrated in Figure 3. Of the hundreds of different commercial surfactants available, the one compound in widest use is an anionic surfactant, the sodium salt of dodecylbenzene sulfonate, which is frequently referred to as alkyl benzene sulfonate or ABS for short.

Synthetic detergents have caused concern among waste and water treatment people for the

past few years for two important reasons. One is that almost the entire industrial production of 3.8 billion pounds is eventually discharged to surface or ground water: the second that some of the surfactants exhibit remarkable resistance to the treatment processes available to the sanitary engineer. A portion of the detergent materials consistently resist adsorption and sedimentation in the primary treatment of sewage. Even sewage plants processing secondary treatment processes are able to reduce only partially the surfactant content. Hence, practically all sewage effluents contain some surfactant, which, because it has survived the rigors of sewage treatment, is inherently prepared for an

even longer survival against the purification agencies in surface and ground waters. In many instances the stream water containing the persistent surfactant is used for municipal drinking water supply.

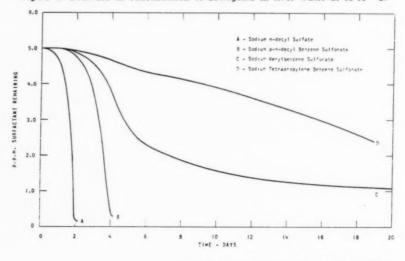
During the past few years extensive technical literature has appeared covering many aspects of synthetic detergents in sewage and water. This discussion will be confined to synthetic detergents in water and water treatment plants.

Effects on River Water

Stream flow is commonly relied upon to dilute and further degrade treatment plant effluent by natural stream purification processes. It becomes pertinent therefore, to consider the persistence of synthetic detergents in river waters.

The surfactants that reach the rivers in sewage plant effluents are those residual materials that have resisted the intense biological activity of sewage and, hence, are not likely to be easily oxidized in river water. In fact, it has been shown that the surfactant in greatest use today will resist natural stream purification processes. In Figure 4 are shown the data of Hammerton (3) which illustrate the rates at which various types of surfactants are destroyed in river water. It is apparent from these curves that a portion of surfactants C and D will persist for longer than 20 days, long enough for this con-

Figure 4. Decrease in concentration of detergents in river water at 18-19 C.



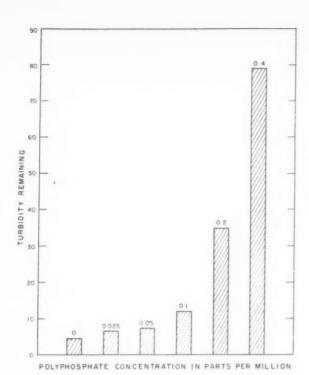


Figure 5. Effect of sodium tripolyphosphate on ferric sulfate coagu lation.

taminated water to arrive at a water treatment plant as part of the water supply.

Along with the surfactant, one group of "builders," polyphosphate compounds are discharged into streams in quantities of two to two and one half times the amount of surfactant. Phosphates are an essential nutrient for biological life and the constant discharge of synthetic detergents into a river provides additional material for growths of algae. Algae may cause difficulties in water plant operation and frequently are responsible for unpleasant tastes and odors in water. Polyphosphates also are important in water treatment, as will be shown later.

Syndets in Water Treatment

During the years 1950-1954, when synthetic detergent sales were mounting rapidly (Figure 1) a number of instances were reported throughout the country of difficulty with the coagulation process in water treatment plants. These difficulties were generally ascribed to the presence of surfactant in the raw water supply. At about this time, in response to requests from

various State agencies, the Robert A. Taft Sanitary Engineering Center initiated research on the effects of synthetic detergents on the coagulation process. (4) (5) Other research laboratories have since published results which have substantially confirmed our work. (6)

At the Center we studied the individual components commonly included in household synthetic detergents to determine which of the major ingredients was responsible for the coagulation difficulties with alum and with iron salts. They were discovered to be the organic surfactant which generally is an alkyl benzene sulfonate, or ABS, and sodium polyphosphate which invariably is sodium tripolyphosphate.

Extensive investigation was carried out on the concentration of surfactant material which interferes with chemical coagulation. The data showed that damage to this process does not occur until relatively high concentrations of organic material are present. These interference concentrations are much higher than any recorded as present in a drinking water supply. It is clear, then, that difficulties

with chemical coagulation can not be assigned only to the presence of surfactants.

Experiments with various concentrations of polyphosphates demonstrated that very small amounts can interfere with coagulation. With a slight increase in phosphate concentration, the process of coagulation can be completely disrupted. Figure 5 illustrates the damage that small amounts of sodium tripolyphosphate can cause to a coagulation with ferric sulfate (5). As little as 0.025 parts per million, or 0.2 of a pound in a million gallons of water, can decrease the quality of chemical coagulation in water treatment plant. While many water supplies now contain interference concentrations of polyphosphates, fortunately no serious damage to water quality has occurred, for several reasons. First, their interference may be overcome by increased coagulant dosage. Second. hardness which is present in varying degrees in practically all waters tends to reduce or eliminate their interference. Third, polyphospates are rapidly converted in sewage to relatively innocuous forms of phosphates.

Removal of Surfactants

I have already indicated that all sewage contains surfactant materials in concentrations varying from a few parts per million to 20 parts or more per million. Sewage treatment processes remove at best up to 50-60 per cent of the original surfactants and sewage effluents contain resistant forms which do not readily decompose. Dilution by river water further reduces the concentration so that municipal raw water supplies now contain surfactant concentrations ranging from a few parts per billion up to perhaps a few parts per million. This water will also contain varying amounts of phosphate compounds, but now in a form which will not interfere with chemical coagulation.

Water treatment processes

have been found ineffective in achieving the significant removal of surfactant material. (5) (7) Chlorination, which is common to all water treatment plants in this country, has no effect in reducing surfactant concentration. Chemical coagulation has been shown by several investigations (5) (7) (8) to be incapable of removing more than minor amounts, from five-10 per cent. Chemical coagulation is, however, very effective in reducing the phosphate compounds to very low concentrations. No research has been reported on the effect of rapid sand filtration which is a step in the water treatment process, on removal of surfactant. This unit process is used in all plants which chemically coagulate water, and indirect evidence indicates that no removals of dissolved materials such as surfactants would be obtained. It has been reported (7) that slow sand filtration, which is more common abroad than in this country, has shown removals up to 40 percent.

When synthetic detergents first became a problem to sanitary engineers, it was stated that turbidity present in most surface waters would adsorb surfactants and remove them by sedimentation. This has since been shown to be wishful thinking, since such predicted removals have not occurred in practice.

To date, only one water treatment process will remove substantial amounts of surfactants, but at such great cost, that it is unlikely any plant will undertake the treatment. This process consists of the addition of activated carbon. which is commonly used in many water plants for the control of tastes and odors. The activated carbon is generally applied in amounts up to 10 ppm, with some exceptional plants using more during short periods of difficulty. Activated carbon will remove surfactant compounds at rates which can be predicted, as shown in Figure 6. (5) For example, if 1.6 ppm of surfactant is present in a water supply, removal to a residual of .01 ppm will require treatment with 120 ppm of carbon; if residuals of 0.1 ppm of surfactant are desired, than 60 ppm of carbon would have to be added. Actually, in both cases, the required doses of carbon are prohibitive economically. Up to the present time, there is no economical way of removing surfactant material from drinking water. Present research activities

are more logically directed toward removal at the sewage treatment plant.

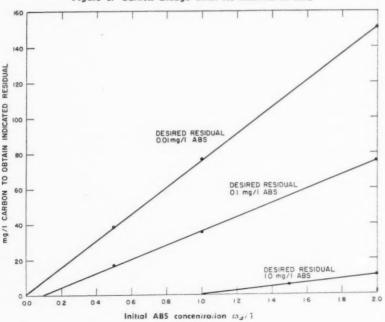
. . . in Ground Water

Growth of suburban areas has increased the use of individual household water supplies from ground water and of sewage disposal to septic tanks or cesspools. Use of small lots for both waste disposal and water source has resulted in increasing incidents of contamination of the ground water with sewage (9) (10) (11). One of the first evidences of detergent pollution of drinking water is foaming at the tap. This qualitative test for surfactant is surprisingly sensitive and will indicate concentrations as low as 0.8 ppm. Pollution by greater concentrations produces, in addition to increased foaming, unpleasant tastes and odors. The polyphosphates which almost always accompany the surfactants apparently do not travel too far through the ground, but are precipitated and immobilized. While the surfactant material may not in itself be hazardous to health, its mere presence serves to warn that sewage has contaminated the ground water. Pollution of ground water is far more serious than similar pollution of a surface water. Underground waters move slowly: it may take months or even years before contamination appears; but once it has occurred, it may require as much or more time before the water is free again from contamination.

Discussion and Summary

The tremendous expansion in the use of synthetic detergents has posed problems for the sanitary engineers that were not present when soap was the common cleansing agent. Those difficulties have appeared for the very reasons that make synthetic detergents more desirable as a cleanser than soap. Soaps are precipitated by hardness, synthetic detergents are not. Soaps are easily decomposed both by acid conditions and biological activity; synthetic detergents are immune to (Turn to Page 119)

Figure 6. Carbon dosage chart for removal of ABS







Gas chromatograph (left) used in conjunction with mass spectrometer (right), which appears at extreme right just in back of gas chromatograph in photo at left. Gas chromatograph separates and gives a record of the number and amount of components in a mixture, while the mass spectrometer gives

information on the identity of individual components as they emerge from the chromatograph. Instrument on top of gas chromatograph in photo at left is an electronic amplifier which serves to increase the sensitivity of this instrument. Both instruments are used in P&G's Miami Valley research labs.

Analyzing Perfume Materials

By Fred H. Lohman*,

Procter & Gamble Co.
Cincinnati

HE interest of the American Society of Perfumers in a subject as technical as "Analytical Instrumentation", I think, suggests that members of the Society are scientists as well as artists. The subject or theme of the Society's symposium seems to be especially appropriate, since recent developments in instrumentation offer the opportunity for a real break-through in the understanding and classification of odors and the elucidation of the sense of smell.

As a large-scale consumer of perfume materials at Procter & Gamble, our principal interest in analytical instrumentation stems from our desire for uniform, highquality finished products, and our

interest in maintaining the perfume or odor identity in our products for a relatively long period of time. In an industry such as ours, where many different products are manufactured in very large quantities, perfumes must also be made in large quantities. To produce such large volumes of perfumes in the quality required to achieve consistent finished products, we depend, first upon a supply of raw materials of uniform, high quality and, second, upon a highly standardized procedure for mixing these materials.

The most important property of a perfume material which

must be controlled is, of course, its odor. While our procedure for odor evaluation by comparison with standards is, in theory, accurate and easy to carry out, the answers are still dependent upon the subjective judgment of a human being. This person, the odor evaluation instrument, if you will, is subject to the human weakness of fatigue; and, since he is an individual, his judgments necessarily reflect a certain personal preference. Some objective measurement to support the odor evaluation is, therefore, highly desirable. In a somewhat secondary sense, perfume raw materials are

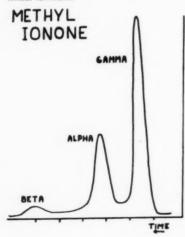
Gas chromatography valuable for investigating problems of odor quality and for studying the composition of such complex natural mixtures as the essential oils. Important as research aid.

^{*}Paper presented during annual symposium of The American Society of Perfumers, New York, April 20, 1959.

organic chemicals; and we must, by analysis, constantly be guarding against the accidental introduction of substances which will interact adversely with the other materials present in our finished products. Since such risk exists for nonodorous as well as odorous materials, the nose cannot be relied upon solely to do the whole job.

Ideally, if an instrument were available by which the chemical composition of a perfume material could be completely determined, then it would only be necessary to specify the composition of a sample giving the desired odor and analyze raw material receipts by this instrumental technique. Like many ideals, this will probably never be realized completely in practice. Nature, it seems, has built into each of us a "detector system" which is more sensitive toward certain substances than any device vet developed by man. However, the technique of gas chromatography, with its instrumentation presently developed to a very high degree of perfection, is a reasonably close approach to this ideal. The well-known packed column and thermal conductivity detectors have provided tremendous assistance; and now, the new ionization detectors developed by Lovelock (1) and others offer a sensitivity which is even greater by many orders of magnitude.

Figure 1—Gas chromatogram of methyl ionone showing resolution of the positional isomers.

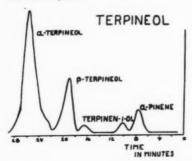


Let's consider for a moment this new level of sensitivity in terms of some actual figures. Ionization detectors are currently in use which will respond to the presence of as little as 10-13 mole of a substance. Since perfume materials, in general, have vapor pressures in the range of 0.1 to 1 m.m. at room temperature, a 1 cc. sample of the vapor over a mixture at 25° -with an average vapor pressure of 0.1 m.m.-would contain 5 x 10-9 moles. A sensitivity to 10-13 mole. therefore, indicates that a component having that vapor pressure and present in a concentration of 0.01 per cent in the mixture could be detected in the vapor above it. This implies that the newer, highsensitivity instruments may be capable of analyzing not only finished perfumes but also the actual vapor composition of the fragrance itself.

Chemical Record Only

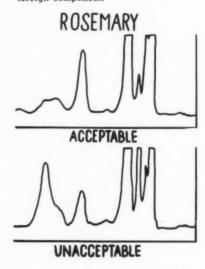
While these facts and possibilities are very impressive, it should be pointed out that the information gained from such instruments is a chemical record of composition and not a subjective odor impression. As such, it would be foolhardy to use this information as a substitute for the sense of smell. Rather, these recent developments provide new and tremendously powerful tools by which the nature of odor and sense of smell might be elucidated and, perhaps, reduced to scientific terms, as is the case with light and sense of sight.

Figure 2—Gas chromatogram of commercial terpineol.



Most of our work, to date. with gas chromatography has been with instruments of comparatively low resolution and low sensitivity: i.e., packed columns rather than the newer capillary columns and thermal conductivity detectors rather than the newer ionization detectors. However, with this equipment we have developed methods and conditions for the separation, identification, and determination of the principal components of a number of important raw materials. At the present time we have methods for ionone and methyl ionone by which the percentage of the various positional isomers present in these materials can be determined. Figure 1 shows the separation of the alpha, beta. and gamma isomers of methyl ionone on which the analytical method is based. The effect of each of these isomers on the odor quality of methyl ionone is known, so it has been possible to establish specifications for the concentration of the various isomers in this raw material. We also have methods for the determination of "cis" and "trans" stereoisomers in certain other materials. In addition, methods for the analysis of commercial materials such as eugenol and its simple esters, as well as terpineol and other important perfume ma-

Figure 3—Gas chromatograms of Rosemary Oil showing the presence of a foreign component.

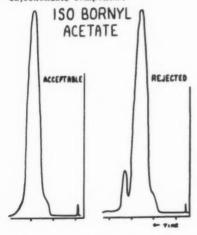


terials, have been developed. The resolution of commercial terpineol into its components is shown in Figure 2. The quantitative effect of these various components on the odor of this material has not been established; however, we hope, as data on more samples are collected, a quantitative correlation between the odor quality and the composition can be made. In addition to these, we have determined conditions for the separation of the constituents of many other raw materials. These data will serve as the basis for the development of many additional quantitative methods in the near future.

Raw Material Aanalysis

Within the year we expect to be using gas chromatography instrumentation broadly for the analysis of raw material receipts in our plants. The results of these gas chromatographic analyses will be correlated with the results of odor evaluation so that, ultimately, practical specifications can be established for the composition of these raw materials as determined by gas chromatography. Because of its simplicity and speed, and because most perfume materials are volatile, distillable substances, the gas chromatographic technique is practically ideal for routine analysis of perfume materials. Thus, a relatively large amount of information

Figure 4—Gas chromatograms of acceptable and unacceptable iso bornyl acetate showing the presence of an objectionable component.





Finished perfume from large mixing tank in background in Procter & Gamble plant is filtered and transferred to drums for shipment and storage. Tanks, lines and drums all are of stainless steel construction.

on the composition of raw materials can be obtained inexpensively in a relatively short period of time. The utility of this instrumentation has recently been extended a great deal by the discovery that nearly all of our present separations can be accomplished on a single column, half of which is packed with a polar liquid phase, while the other half is packed with a nonpolar liquid phase. The advantage of the mixed packing is that it is now possible to analyze either polar or non-polar substances or both without changing the column. Certainly this is important to perfume materials where both types are encountered.

Apart from its routine use we have found the technique of gas chromatography very helpful in the solution of day-to-day quality problems. It is often very difficult to translate a description of the "off note" found in a raw material into chemical terms so that a process

can be adjusted. However, gas chromatography patterns of the problem material and an acceptable standard frequently reveal this odor deviation in terms of a difference in chemical composition. An example of this recently arose in connection with a sample of Rosemary, which, by olfactory examination, possessed what seemed to be a terpineol note. A comparison of the gas chromatograms of this sample with a Rosemary of acceptable quality (Figure 3) showed the presence of a peak not normally found in this oil. A chromatogram of alpha terpineol under the same conditions gave a retention time identical with that of the abnormal peak in Rosemary.

Another such example from the aromatic chemicals class is shown in Figure 4. Iso bornyl acetate of unacceptable odor quality, when examined by gas chromatography and compared with

(Turn to Page 121)



Once clerk has ascertained that shipment is correct, he moves few steps to receiving office where "TelAutograph" transceiver is located, and writes data in longhand. No special training is necessary to operate the machine.

Starting point of longhand communications system at John H. Breck. Inc., Springfield, Mass. is loading dock, where goods arrive throughout the dav. Here receiving clerk checks out a pallet of material that has just arrived at the Breck plant.

Breck Message Network

By Arthur C. Robertson,

Warehouse Supervisor, John H. Breck, Inc. Springfield, Mass.



From receiving office at Breck, longhand information is automatically received on "Tel-Autograph" units located in a number of departmonts. In various offices, for instance, an "Instan-Form" is filled out with just what had been written in receiving office. single communications network involving only five sending and receiving machines, has enabled John H. Breck, Inc., "to kill four birds with one stone." The network, which consists of direct wire transmission of longhand messages, has made possible these four important systems:

1. A receiving report system by which we can advise the interested departments immediately upon arrival of raw materials, supplies, advertising matter or anything else received by the company. The messages which these departments receive, in turn, initiate an additional flow of paperwork designed to control the arrivals and

Network consisting of direct wire transmission of longhand messages serves as system for: receiving reports, quality control, inventory updating and serves as emergency action system.

see to it that goods are moved rapidly to the point where they are required.

2. The same communications network functions as a quality control system. Through longhand transmission units located in our laboratory and at the finished goods check-out station, we minimize the time it takes to send batch release or batch hold orders. In other words, through the network we get our quality control data where it is needed within seconds after the lab has completed its analysis.

3. The longhand network also functions as an inventory updating system. As materials are received, the information is recorded in our production control office by a longhand receiving unit for posting to stock record cards. In short, we keep a running balance of inventory which gives management a minute-by-minute picture of our stock position.

4. Finally, the network is used as an emergency action system. When a tank car of chemicals, for instance, comes into our loading yard we can alert all the people concerned and effect a transfer of the material in minimum time. This system is particularly effective when we are waiting for arrival of material needed in production.

The basic concept behind this communications system at John H. Breck, Inc., is the immediate distribution of information to the interested departments. The system is designed also, to maintain adequate controls so that all information is properly authorized and recorded in a form that is both accurate and permanent. In practice, our present system using "Tel-Autograph" equipment has proved to be the most efficient way to do the job. It connects a number of physically separated points into one common network which can serve

several needs of the Breck plant.

Since Breck preparations for the hair went on the market nationally in 1946, backed by a major advertising campaign, sales volume has increased steadily. Because of the increasing demand for Breck preparations, a modern plant and warehouse in West Springfield, Mass., were opened in 1952. These new quarters include, on eight acres of land, a one-story brick building containing 75,000 square leet of floor space, a railroad siding, and outdoor areas.

Our constantly-growing volume of sales and the size of our new plant created the need for our present communications system to handle various types of production and shipping information accurately and efficiently. In our receiving report system, for instance, when goods are deposited at our receiving dock the clerk in charge checks the commodity and quantity on the pallet, and then walks a few steps to the receiving office where the "TelAutograph transceiver" is located. Reading from the delivery receipt accompanying the goods,

"TelAutograph Instan-Form" supplies permanent and accurate record for a number of functions. Here, stores clerk at Breck makes ready to place an "Instan-Form" in a file indicating which batches have been cleared for shipment. Quality control system at Breck is speeded up by this transceiver which gets information to and from lab in least possible time. Here lab technician writes information pertaining to a batch of material that has just been analyzed.



the clerk writes the information onto the "transceiver" just as though he were writing any longhand message. This is an important point simply because it means that no special training is required to operate the machines.

As the clerk writes the message in longhand, it is recorded automatically on paper "Instan-Forms" feeding through both his "transceiver" and the unit receiving the message. Unlike oral communications methods, in which a message has to be transcribed after receipt, or else remembered by someone (a precarious way to "file" data) the "TelAutograph" unit provides automatic, instant and positive proof of the communications. The message is recorded and can be filed and retained for as long as necessary.

At the sending "transceiver" in the receiving office, for example, the "Instan-Form" is torn off the machine and stapled to the freight bill accompanying the shipment. Then, once each day, these forms are taken to the purchasing department where they are matched with the invoices covering the shipment. Thus, the "Instan-Form" is additional proof of the arrival of the goods.

In other words, through the communications network we have completed two functions at this point: We have alerted the various departments and we have provided visual proof that the goods are in the house.

As far as receiving unit "Instan-Forms" is concerned, each department retains copies pertaining to its particular function. The warehouse office, for instance, retains all copies pertaining to packaging supplies while the control lab keeps copies referring to the arrival of raw materials.

In the laboratory, messages received on the "transceiver" are delivered to the chief chemist as an aid in the control of chemicals. This insures that all raw materials are analyzed carefully before use.

By the same token, the lab is

responsible for the quality of all products leaving the plant. Before any Breck preparations leave our loading docks, they are checked rigidly to make sure they conform to standards.

Once the lab has analyzed our preparations, however, it is important that we get the information back to the finished goods check-out station so that they can be released to customers. The communications system comes into play here, with the lab "transceiver" connected by direct wire to a receiving unit at the check-out station. Within seconds after the chemist has completed his analysis he can transmit the batch number. time, date and his initials. These data are recorded instantaneously on forms feeding through both his "transceiver" and the receiving unit at the check-out station. In other words, we have a permanent record of the authorization to ship, delivered immediately after the product has been analyzed.

The same degree of speed and control is evident in the other systems built around the longhand network. The production control office, for example, uses the reports which come over its receiving unit for posting to stock record cards. This provides the company with a running balance of inventory, so that management can tell at any given time exactly how much of a particular chemical, supply or other material we have on hand. In short, we can update our inventory records speedily and accurately as a result of the instant transmission of written information from the receiving dock to the production control office.

All of this serves to reduce time and motion in getting information to our various departments. Under our previous system—which did not provide a quality control operation—when goods arrived at our dock a multi-copy form was filled out and hand-distributed to the departments concerned. But this procedure presented one glaring shortcoming: there was always

the chance a slip could be lost or misplaced en route—and hence, a department never notified that the goods had arrived.

With our present longhand communications system, however, there is virtually no chance of losing data. For one thing, we have eliminated hand delivery of messages; for another, we retain control copies at both ends of the procedure; and finally we can record the message right in the department whether or not an attendant is present at the machine. An outstanding feature of our network is that longhand messages are recorded automatically-and remain at the machine unti! physically removed by the person for whom they are intended.

Generally speaking, the longhand communications set-up at John H. Breck, Inc., is a relatively simple system. Recently, when department heads were questioned, in a routine check of the efficiency of the system, one supervisor had this to say: "I'd be lost if they took it away. It's the most efficient method of doing the job."*

Automation at Chem. Show

New developments in continuous process analysis and control will be prominently featured at the 7th Exposition of Chemical Industries, to be held at the New York Coliseum, Nov. 30 to Dec. 4. Progress toward integrating individual process steps into continuous and automatic production lines will be evident, when compared with the last show two years ago.

An autoanalyzer system will be shown, said to provide accurate and reproducible chemical analyses at rates of up to 60 tests an hour. It can monitor concentrations of phosphates, sugars, etc.

This year's show will feature 475 displays, which will include instruments, materials, equipment for production and materials handling, and other items of interest to the chemical processing industries.

Textile Trends and Detergency

By H. C. Borghetty and G. M. Gantz*,

General Aniline & Film Corp. New York

AJOR changes have occurred in the textile industry in the last decade. The most important change has been the development and commercialization of many new synthetic fibers. The rise in consumption of synthetic fibers is illustrated in Figure 1 (1,2). It would appear that the advent of synthetic fibers has caused a decline in wool consumption and retarded the growth of viscose and acetate rayons. Cotton is still the most important textile fiber volume wise, but it has been losing ground slowly on a percentage

The synthetic fibers can be divided roughly into three chemical types: polyamides such as nylon 6 or nylon 6,6, polyesters such as "Dacron" (*), and vinyl polymers, more commonly called acrylics, such as "Acrilan" (**), and "Orlon" (***). (There is a great host of new synthetic fibers in various stages of development running from "Acrilan to "Zefran"†. No attempt will be made in this paper to identify or describe them).

Synthetic fibers have found a variety of applications in industrial fabrics, carpets, upholstery and drapery fabrics, as well as in wearing apparel. One common characteristic of synthetic fibers is their hydrophobic nature. This property is illustrated by the moisture regain values shown in Table I. The intrinsic hydrophobic nature of synthetic fibers affects ease

Table I. Moisture Regain Values for Textile Fibers.

(70°., 65% RH)	
Wool	17.0
Silk	11.0
Viscose	11.0
Cotton	7.0
Acetate	6.0
Acrilan	1.6
Nylon	4.2
Orlon	1.0
Dacron	0.5

of drying, dveing and finishing, soiling, and soil removal. It also permits manufacture of wash and wear garments which are discussed

It should not be thought that manufacturers of older fibers have been sitting idly by while the new fibers have encroached upon their markets. Both cotton and wool are quite important in blends with the synthetic fibers. Continuing research and development have improved both acetate and viscose rayons in recent years. A variation of acetate rayon, cellulose triacetate, a more hydrophobic fiber is being marketed successfully both in this country and abroad. Improved viscose rayon tire cord

^{*}Paper presented at 32nd annual convention, Association Am. Soap & Glycerine Producers, New York, Jan. 21, 1959.



^{*}Trademark for Du Pont's polyester fiber.
**Trademark for Chemstrand's acrylic fiber.
*Trademark for Du Pont's acrylic fiber.
†Trademark for Dow's acrylic fiber.

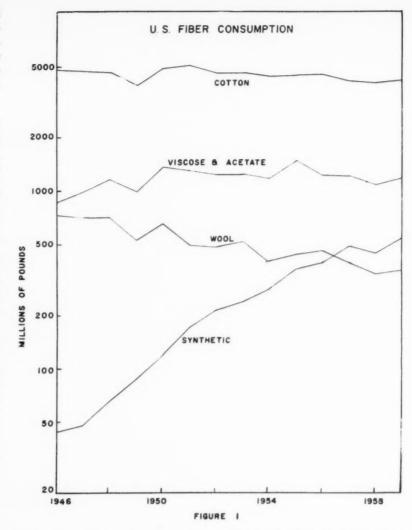
is making a determined stand against nylon cord. Chemical modification of cotton by resin treatment has permitted it to enter the wash and wear field with white as well as dyed or printed fabrics.

Wash and Wear Fabrics

The term "wash and wear" refers to fabrics or garments that can be hand washed, drip dried, and worn again with little or no ironing. The trend to casual living and the easy care feature of wash and wear textiles have led to sales of millions of garments.

Garments or textile items of 100 per cent synthetic fiber can be designed for wash and wear promotion because the fibers are inherently hydrophobic and wrinkle resistant. Many items such as sheets, hosiery, blouses, undergarments and sport shirts of synthetic fibers are considered wash and wear and have presented no serious detergent problems. Men's white dress shirts of 100 per cent nylon or "Dacron" are another story. Soil picked up around the collar and cuffs does not wash out readily. Concentrated soap or detergent and local mechanical action is required to remove these dirt rings. Perhaps the wearing comfort or feel has been more important than the detergency problem in limiting sales of 100 per cent synthetic wash and wear shirts

A blend of "Dacron" and cotton has been quite successful for white wash and wear shirts. "Dacron" provides wrinkle resistance while cotton reduces pickup of static electricity and improves the comfort quality. These two fibers behave differently, however, as regards soil pickup and soil redeposition. "Dacron" has no affinity for the brightening agents in household soaps and detergents. After repeated home or commercial launderings the "Dacron" fibers tend to acquire a grayish tinge while the cotton becomes tannish. The garment may become striated or mottled and appear much less attractive than the original white.



This is a problem for detergent manufacturers and the answer may lie in boosting the anti-redeposition properties of detergents.

It has been little over a year since 100 per cent cotton wash and wear white shirts were introduced. These resin treated shirts have already become an important segment of the entire shirting market and show promise of continued growth.

Textile technologists have known for many years how to apply thermo-setting resins to cotton and rayon fabrics to achieve wrinkle resistance. Resin treated cotton and rayon garments, which could almost be classed as wash and wear, dyed or printed, have been on the market for years. The resins in use, however, were not suitable for white shirts subject to commercial laundering because of color change or strength loss due to chlorine bleach. A new triazone type resin shown in Figure 2, was found which withstood commercial launderings and permitted manufacture of cotton wash and wear white shirts (3). Certain non-nitrogenous resins (such as the epoxides (4) and the acetals (5) show promise for use in white cotton shirts also.

Application of the resin in the textile mill involves saturating the clean bleached fabric in a solution of resin and acid catalyst, squeezing out excess liquid, drying, and curing for 2 minutes at 310 F. The fabric is then washed in a synthetic detergent and soda ash solution, dried, and finished with

an optical brightener and softener. It is often necessary to use higher than normal concentrations of optical brightener to avoid acid color blueings in order to obtain good whites.

Resin treatment renders the cotton fiber crease resistant and reduces moisture absorption so necessary for drip drying. The resin itself imparts an affinity for acid dyestuffs which normally do not dye or stain cotton. More important is the fact that affinity for direct dyestuffs, including optical brighteners is markedly reduced.

Wash and wear cotton shirts present a problem to detergent manufacturers in that pickup of brightener is about 25 per cent of that for untreated cotton. This may require increasing the brightener concentration in household soaps and detergents or finding new types of brighteners with greater affinity for wash and wear cotton.

Laundering Synthetics

A vast array of new synthetic fibers is reaching the market as staple or filament yarns in 100% tabrics, in blends with each other, or in blends with cotton, wool, viscose, and acetate. The new fibers have many advantageous properties including strength, resilience, abrasion resistance, mildew resistance, and moth resistance. Two properties which might be termed disadvantageous and which are related to detergency are propensity to pickup static electrical charge and soiling tendencies.

Accumulation of static by textile fibers is directly related to their hydrophobic nature and varies with relative humidity. Many

Figure 2

1.3-Dimethylol, 5-alkyl perhydrotriazone

anionic, nonionic, and cationic surfactants function as antistatic agents at concentrations of 0.5 to 1 per cent on the fiber. They are non-durable, however, and usually removed in one washing. Durable antistatic agents have been under development for many years but none seems to be completely satisfactory (6). Charged fabrics pick-up oppositely charged dirt or dust particles. If the dirt is sooty in nature it may be held rather tenaciously by synthetic fibers and not wash out readily.

As a general rule, synthetic fibers can be considered more soil resistant than natural fibers. They have smooth surfaces and rounded cross-sections. The textile industry considers them easier to scour than natural fibers. Exceptions must be noted in the case of graphite used in lace manufacture and certain oil type soils. High concentrations of detergents with solvents have provided the best answer for graphite removal and nonionic surfactants are used with alkali to remove oily soils.

Manufacturers of household detergents may benefit by considering what has happened to soap and synthetic detergents in the textile industry. For many years, of course, soap has been used only for a few operations such as wool scouring and fulling. In synthetic detergents, the trend has been away from anionics and toward nonionics (7,8).

Use of nonionics by the textile industry has grown at the expense of anionics because of price and performance. They are more versatile than anionics and can be tailored for specific applications. Textile operators have finally learned that foam is not a criterion of detergent, wetting, or emulsifying efficiency. Nonionics have also had a marked growth, of course, in packaged household detergents. This trend will continue if the textile industry can be used as a guidepost.

One new development in the chemical industry could have a very important effect on both the textile industry and detergent manufacturers. Fluorocarbon polymers repel both oil and water. A fluorocarbon resin has been developed which is used very effectively on upholstery fabrics, wool and leather to prevent staining (9). If a resin of this type could be designed for washable cotton, rayon, and synthetics, detergency problems might well be minimized. One could imagine, however, that the brightener problem would be very great.

Summary and Conclusions

It is both difficult and audacious to attempt to predict what course detergent manufacturers will follow as a consequence of recent developments in the textile industry. The following ideas are offered as mere suggestions:

- Develop formulas with improved soil suspending properties
- Find better brighteners or increase brightener concentration for wash and wear cotton.
- Develop more versatile detergent formulations for new synthetic fibers in blends with natural fibers.
- Develop more versatile detergent formulations to function in cold, warm, and hot water.
- Develop detergent formulations with better emulsifying action for synthetic fiber textiles stained with oil and grease (this may involve solvents).
- Develop a synthetic fiber rinse to eliminate pickup of static electricity.

Acknowledgment

The authors wish to acknowledge helpful comments by Dr. Jules Labarthe of the Carnegie Institute of Technology, Mr. L. G. Johnston of the American Institute of Laundering and by their colleagues at General Aniline and Film Corporation. Special acknowledgment is made to Mr. H.

(Turn to Page 199)

Complaint "Unnecessary" P&G tells FTC

A COMPLAINT was filed on July 31st by the Federal Trade Commission against Procter & Gamble Co. and its whollyowned subsidiary, Procter & Gamble Distributing Co., both of Cincinnati. The companies are charged with illegally restraining trade through their promotional program of putting free samples of their detergents in new washing machines. P&G was granted 30 days from the complaint date to file an answer but at press time it had not been learned what action the company had taken. At the time of the complaint, which also charged the company with falsely claiming that washing machine manufacturers recommend its detergents as better than competitive products, a P&G spokesman in Cincinnati said the company was "puzzled" by the charge and that the "complaint refers to contracts which no longer exist."

Products involved are "Tide", "Dash", and "Cascade". According to the complaint, P&G gained a monopoly in the free sample method of promotion under a program begun in 1954 in which the company signed exclusive free sampling contracts for "Tide" and "Dash" with every domestic manufacturer of automatic top-loading and front-loading washers and automatic washerdryer machines. These contracts, FTC says, violate the anti-trust law by preventing competitive detergent manufacturers from engaging in free sampling and from receiving the prestige of manufacturers' endorsements. In its charge of false advertising, the Commission challenged the company's advertising claim of manufacturer approval of the free sample detergent. One of many advertising claims cited in the complaint was:

"There's a good reason why Westinghouse recommends 'Dash' for the automatic washers. For in this automatic 'Dash' gets clothes cleaner than any product in the world." Contrary to such advertisements, the complaint states, manufacturers insert free samples of the P&G products only because of the contracts and the free advertising they receive and not because they believe the products are better than competing detergents and recommend them.

The value of the contracts was also enhanced, according to the complaint, by the companies' failure to reveal in their advertising that they solicit and pay for the exclusive free sampling and in that way misrepresent the status of their relationship with the washer manufacturers.

In the complaint the FTC described P&G's free sampling contracts. Washing machine manufacturers are given free packages of detergent to be placed in each machine when it is crated. They agree to insert no other competitive products in their machines, to allow use of their names in promotional advertising paid for by Procter & Gamble, to encourage their distributors, wholesalers and dealers to use the detergents in demonstrations, to endorse use in the washers, and to cooperate with P&G in jointly promoting the washers and the particular detergent involved. In return, P&G agrees to feature the washers in its advertising. The commission estimated that the cost of this advertising to P&G and its subsidiary is "several million dollars each year" and that the advertising value to a leading washer manufacturer "runs as much as twothirds to a million dollars a year."

The complaint also charged Procter & Gamble with entering into similar contracts with distributors, demonstrators, and dealers as well as manufacturers.

The complete statement of a Procter & Gamble spokesman regarding the FTC complaint follows: "We are puzzled by this Federal Trade Commission action. Procter & Gamble does not have any exclusive contracts with manufacturers of automatic washing and dishwashing machines, nor does it have an advertising program of the sort described in the complaint.

"Sometime ago when the Federal Trade Commission staff asked questions about our promotional program with manufacturers of automatic washers and dishwashing machines, we told them that P&G would change its contracts and change the content of supporting advertising. We believed that our practices had been perfectly legal and fair, but we did not feel the matter was important enough to justify prolonged legal proceedings.

"Therefore, the complaint refers to contracts which no longer exist and to advertising which hasn't been run for many months. Under these circumstances the issuance of a formal complaint seems totally unnecessary."

Mennen Realigns Brands

A realignment of brands between the advertising agencies of the Mennen Co., Morristown, N. J., was announced recently by Sylvester J. Cleary, advertising manager. The move was brought about by the company's accelerated expansion program which includes the introduction of 16 new products next year, some of which will be introduced nationally and some in test markets. Grey Advertising Agency, New York, now handles "Date-Line Stick Deodorant" in addition to "Foam Shave," "Pre-Shave," "Afta," "Quinsana," and "Baby Products." Warwick & Legler, also New York, which handles the "Mennen" line of "Skin Bracer," "Cologne," "Spray Deodorant," and "Speed-Stick Deodorant," has been given "Tube Shave Creams" and "Men's Talcs." Both agencies will handle some of the new products which will be announced.

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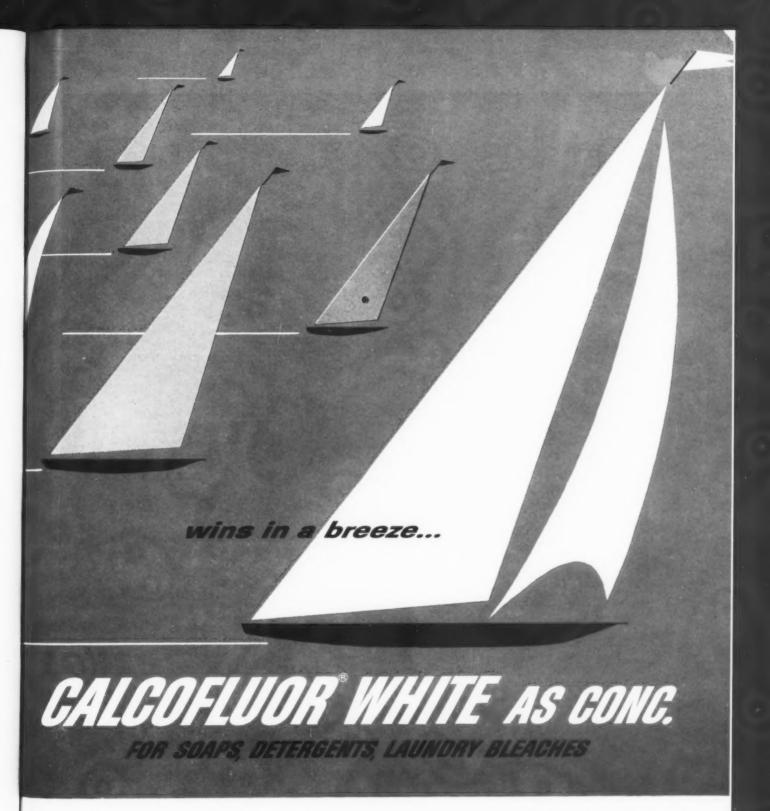
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The chart at the right lists the other Calcofluor Whites available. The technical staff of the Dyes Department is ready at all times to assist you in making the proper selection. For complete information, contact your representative.

AGENT	NUE OF WHITE ON FABRIC	SUBSTANTIVITY
Calcofluor White 5B Conc.	slightly greenish blue	cotton, viscose
Calcofluor White MR New	slightly reddish blue	cotton, viscose
Calcofluor White M2R New	slightly reddish blue	cotton, viscose
Calcofluor White AS Conc.	slightly reddish blue	cotton, viscose
Calcofluor White SD	slightly reddish blue	nylon, acetate, wool, silk
Calcofluor White LD	slightly reddish blue	nylon, acetate. wool, sifk

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ing a tenth of a penny to your cost.

Dissolve faster Shea® spray-dried sodium tripolyphosphates dissolve two to three times faster than conventional forms, since they have so much more surface area.

No bridging or caking The air content of Shea phosphates keeps them loose and free flowing at all times.

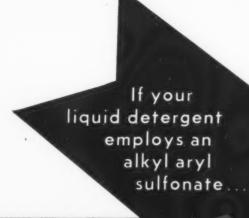
Shea sodium tripolyphosphate is 97% to 99% pure—highest in the industry. For more information on these spraydried products or other Shea phosphates, write to the address below. Disodium phosphate, trisodium phosphate, sodium hexametaphosphate, and sodium tripolyphosphate are available in conventional density, granular form.

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Krystallex S. A conventional dodecylbenzene sulfonic acid.

Krystallex S-75. An ammonium alkyl phenoxyethylene sulfate.

Krystallex LA. A 100% active non-ionic fatty acid alkanolamide manufactured for use as a foam stabilizer.

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Krystallex CDA. A modified coconut fatty acid alkanolamide used in scrub soap concent Has outstanding resistance to hard water

Krystallex C. sodium laury sulfate—
characterized by its uniform high viscosity—
excellent base for creme shampoos.

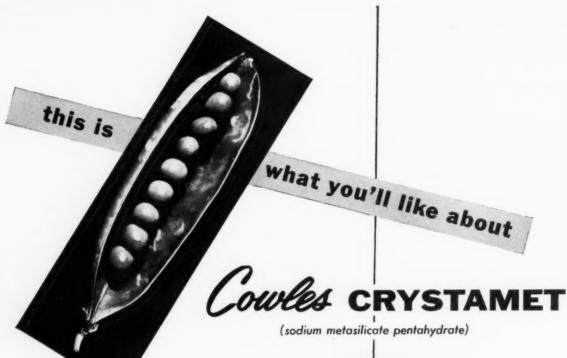
Krystallex A. A sodium lauryl sulfate with a very
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High activity, low cloud point, very light color
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- 1. Efficient cleaning with no surface attack of the mold.
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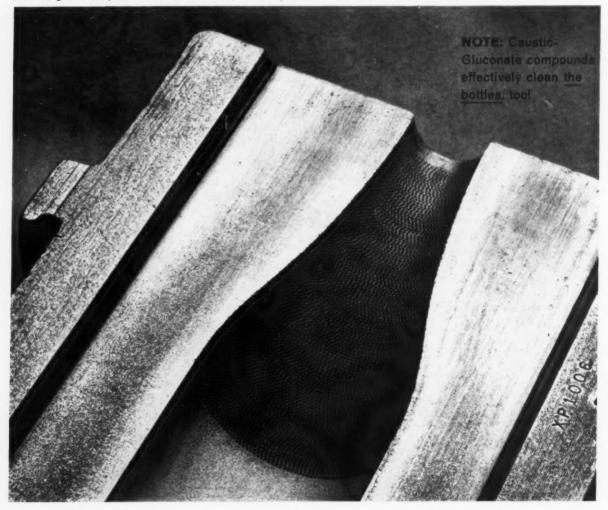
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HEMICAL

September

A Series for Chemists and Executives of the Solvents and Chemical Consuming Industries

New Sodium Hydride . Analysis Developed

A new and unconventional method of analyzing sodium hydride for contained sodium hydride and residual sodium was developed recently at the U.S.I. research laboratories.

The determination of completeness of reaction between sodium and hydrogen to form the hydride presents a problem because of the reactivity of the latter with air and moisture. Sampling is difficult and conventional analytical procedures are inadequate since both sodium and sodium hydride yield hydrogen

and caustic when treated with water.

The method developed by U.S.I., however, is actually based on the differential amounts of hydrogen and caustic formed when sodium hydride containing small amounts of sodium is treated with water in a decomposition flask.

The sample need not be weighed if only the relative amounts of sodium and sodium hydride are desired. Accuracy depends on rigorous sampling, and the best method involves the use of a small 10cc, hypodermic syringe, Weight of sample can be obtained, if de-sired, by weighing the syringe (with material

being analyzed) before and after introducing

the sample into the decomposition flask.

A data sheet giving complete details on this A data sheet giving complete decays on this method of analysis and a diagram of the apparatus can be obtained from U.S.I. upon request. Production of sodium hydride from dispersed sodium is outlined in U.S.I. Sodium Dispersions brochure, also available on request.

New Zirconium-Copper Alloy Now on Market

A recently developed zirconium-copper alloy. said to possess excellent electrical conductivity and high-temperature strength properties, is expected to find many applications in the electrical field. The new alloy consists of highconductivity, oxygen-free copper and carefully controlled concentrations of high-purity zirconium.

It is distinguished by the high strength level it develops through cold working and the extent to which it retains this strength at elevated temperatures. A typical bar of the alloy, coldworked 60% and aged for one hour at 400°C exhibits the following: tensile strength, 63,000 psi; yield strength, 59,000 psi; elongation, 12%, electrical conductivity, 90-95%. At 400°C, the short time tensile strength is 46.500 psi. Additional cold-working will increase the strength of the alloy without sacrificing ductility and electrical conductivity. Endurance tests show it to be far superior to unalloyed copper.

The high softening temperature of the alloy permits welding, brazing, silver soldering. Silver plating is also practical with only minor modifications in procedures. Billets cast with the new alloy are reported to be free of inclusions and flaws - hence have better hot and cold workability.

First Interim Regulations On Tax-Free and SD Alcohols Implement 1958 "Changes" Act

Continuing Industrial Use Permit Is One of Major Changes.

The first interim regulations written to implement the Excise Tax Technical Changes Act of 1958 (Public Law 85-859, 72 Stat. 1313), which went into effect July 1 this year, were published in the Federal Register of June 12. These regula-

tions provide for administration of the Internal tions provide for administration of the Internal Revenue Code of 1954 as amended by the "Changes" Act, and will be effective until superseded by permanent regulations. The following changes are significant for

users of pure and specially denatured ethyl alcohols:

(1) Industrial Use Permits — permits to use SD Alcohol, Form 1481 and Tax-Free Alcohol, Form 1447, issued effective on or after July 1, are continuing (unless terminated by the terms thereof, suspended, revoked or voluntarily surrendered). It was formerly necessary that these permits be renewed each year.

(2) Withdrawal Permits - issued on or after July 1 expire as follows: SD Alcohol, Form 1485, expires October 31, 1960; Tax-Free Alcohol, Form 1450, expires April 30, 1961. It was formerly necessary to obtain new permits each year.

Use of Tax-Free Alcohol has been ex-tended to include blood banks, educational organizations exempt from federal income tax, pathological laboratories with certain restrictions. The blood banks were not previously specified. The restrictions of use by various institu-MORE tions have been clarified.



What's Cooking? World's first all-titanium frying pan is being used here by Jean Gregoire, executive chef of New York's Hotel Roosevelt, to fry eggs for hungry patrons. The experimental pan was fabricated by Mallory-Sharon Metals Corporation, Niles, Ohio (one-third owned by U.S.I.), as part of a nationwide program to promote uses for the light, strong, corrosionresistant metal.

Ethanol Widely Used in Pharmaceutical Aerosols

Medicine in aerosol form, for therapy by inhalation, has gained considerable acceptance in the last few years. There is much welldocumented clinical evidence for the suitability of aerosols in the treatment of asthma, for example. And as new aerosol formulations are developed and tested clinically, it is expected that this form of inhalation therapy will be used even more widely in the future

Judging from a group of typical formula-tions published recently by Drug and Cosmetic Industry Magazine, ethyl alcohol is an essential ingredient in this type of

pharmaceutical aerosol. Examples of bronchodilator amine

MORE

AEC OKs Operation at Full Power for World's Largest Private Research Reactor

The largest independent industrial research reactor in the world is now being operated by Industrial Reactor Laboratories, Inc. at Plainsboro, N. J., for U.S.I. and nine other companies. After extensive safety tests, the Atomic Energy Commission recently authorized oper-ation of the reactor at its full design power level of 5,000 kilowatts (thermal).

Previously the facility had been granted authority to operate at power levels not exceeding 100 kilowatts during tests which included stringent safety studies. Upon completing these tests, the AEC supplemented its amendment to IRL's license. It now states that, in the opinion of the Commission's hazards, avalation brought the property and properly avalation brought the safety and according to the commission of the Commission's hazards, avalation brought the safety and according to the commission of the Commission's hazards avalation brought the safety and the commission of the commissio ards evaluation branch, the reactor can be operated at the five megawatts rate without undue hazard to the health and safety of the

September

U.S.I. CHEMICAL NEWS

1959

CONTINUED

Alcohol Regulations

- (4) Samples proprietors may now furnish without permits samples of SD Alcohol of one quart to users, applicants or prospective applicants for permits (for experimental purposes or preparation of sam-ples to be submitted to the Director). Previously only samples up to eight ounces could be furnished without permits.
- (5) Carrier Permits permits are no longer required to transport tax-free, specially denatured and undenatured alcohol, including tax-free distilled spirits.

As further interim regulations are published, U.S.I. will endeavor to keep industrial alcohol users informed as to the important changes.

CONTINUED Aerosols

formulations included one containing:

Propellants

Isoproteronol HCl 0.20%

Water ... 2.00% Ethanol (absolute) ... 37.80%

Typical cardiovascular drug formulations in-

Nicotine]	1.00	%	
Ethanol	959	6						*														34	1.00	%	
Propella																									
And an an tained:	tisp	as	m	10	t	ie	-	f	0	Г	n	11	1	a	1	i)1	1	Man	zi	V	er	1 cc	n-	
Atropine								*															0.1	%	
Ethanol	959	6																					9.9	%	

Propellants90.0%

U.S.I. Appoints New Sales Manager for Detroit Office

On September 30th, Fred M. Henley retires as Manager of the S.I. Detroit Sales Division, after a long and successful career with the company. Succeeding Mr. Henley is Walter J. Kilmer, who has been associated with U.S.I. for 25 years as a sales representative for the company in the Buffalo, N. Y., area.

cluded the following:



W. J. KILMER

TECHNICAL DEVELOPMENTS

Information about manufacturers of these items may be obtained by writing U.S.I.

New cleaning agent claimed to combine functions of solvent and detergent can now be obtained. Has low volatility, no flashpoint. Forms clear solutions with water, all chlorinated solvents, most safety solvents.

No. 1510

New periodical on biochemical and biophysical research now being published and sold. Said to meet need for rapid dissemination of information in experimental biology. Information appears as short, well-documented communications. No. 1511

Water-soluble anti-caking agent said to be effective in concentrations as low as 0.025-0.05%, is now on market. Material is organic, practically salt-free. Available as 98% powder and 50% free-flowing liquid.

No. 1512

Simple slide rule for polyethylene film and bag measurements has been developed. Permits rapid determination of width, length, total area, weight, gauge in one setting of the rule, with only one or two constants known.

Diethylaminos nyl phenylethyl acetate citrate has been found, in new research, to exhibit stronger, faster broncho-dilating action than ephedrin. Cough reflex is stopped more effectively than by codeine.

No. 1514

Chemistry of drugs is covered in new book now being sold. Both synthetic and natural drugs are discussed as to structure, preparation and syn-thesis, properties, uses. A table gives approved, chemical and proprietary names.

New fatty-nitrogen-derived corrosion inhibitor has been developed for use in 5, 10, 15% HCl over a wide temperature range. Claimed to control corrosion on metals such as stainless steels 316 and 420, monel, bronze, mild steel.

No. 1516

Objective measurement of odor is said to have been achieved by techniques which use the latest in ionization detector gas chromatography equipment. Permits correlation between subjective and objective odor evaluation.

No. 1517

First chewable iron tablet for children has been introduced. Contains ferrous fumarate and vitamin C and will not stain teeth, according to manufacturer. Intended for oral treatment or iron deficiency anemia.

All-polyethylene chemical pump for dispensing from drums, carboys, etc. can now be obtained. Said to operate with ease and wear-free smoothness, due to special valve design. Furnished with -bung adapter.

U.S.I. at the International Plastics Show

.....60.00%



U.S.I.'s booth at the International Plastics Exhibition was the background for the opening ceremony, June 17th, in Grand Hall, Olympia, London.

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Organic Solvents and Intermediates: Normal Butyl Alcohol, Amyl Alcohol, Fusel Oil, Ethyl Acetate, Normal Butyl Accetate, Diethyl Carbonate, DIATOL®, Diethyl Oxolate, Ethyl Ether, Acetate, Diethyl Carbonate, DIATOL®, Diethyl Oxolate, Ethyl Ether, Acetane, Acetacetanilide, Acetacet-Ortho-Chloranilide, Acetacet-Ortho-Toluidide, Ethyl Acetacetate, Ethyl Benzoylacetate, Ethyl Chloroformate, Ethylene, Ethyl Sodium Oxolacetate, Sodium Ethylate, Urethan U.S.P. (Ethyl Carbonate), Bibboduic U.S.P. Riboflavin U.S.P.

Pharmaceutical Products: DL-Methonine, N-Acetyl-DL-Methonine, Urethan USP, Intermediates.

Heavy Chemicals: Anhydrous Ammonia, Ammonium Nitrate, Nitric Acid, Nitrogen Fertilizer Solutions, Phosphatic Fertilizer Solution, Sulfuric Acid, Caustic Soda, Chlorine, Metallic Sodium, Sodium Peroxide.

Animal Feed Products: Antibiotic Feed Supplements, Calcium Pantothen-ate, Choline Chloride, Special Liquid CURBAY, Menadione (Vitamin K₃), DL-Methionine, MOREA® Premir, Riboflavin Products, U.S.I. Permadry, Vitamin B₁₂ Feed Supplements, Vitamin D₃.



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As do nine out of ten other housewives, this one uses liquid chlorine bleach in her automatic washer. According to Maytag, maker of washer shown, 32 per cent of all families deing laundering at home use bleach for its whiteaing-heightening action on fabrics. See article. Bleaches and Brighteners." which begins on page 78.



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Bleaches & Brighteners

By Robert E. Ferris*

S with many subjects, there is a need for definitions to prevent confusion when discussing bleaches and brighteners. First, let us consider compounds called brighteners. They have been referred to not only by that name, but by various terms such as "fluorescers", "optical dyes", "optical brighteners" and even "optical bleaches". Strictly speaking it is not incorrect to refer to a brightener as a bleaching material. However, designating a brightener as a bleach can lead to confusion since both brighteners and other types of bleaches are used in laundering. A brightener is a bleach in the sense that a soap is a detergent. And, for the reason that a distinction is made between detergents and soaps, for the purposes

*Paper presented during 32nd annual meeting, Association of American Soap & Glycerine Producers, Jan. 22, 1959.

Dr. Ferris was chemical and product research director of the marketing division of Purex Corp., South Gate, Calif., at the time he presented this paper. He has just resigned from Purex to form his own consulting firm. Dr. Ferris joined Purex in 1951 and was appointed direc-tor of research in 1952.



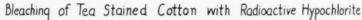
Although liquid type chlorine bleaches still dominate the household and industrial bleach market, powdered products are climbing fast. Photo courtesy Purex Corp.

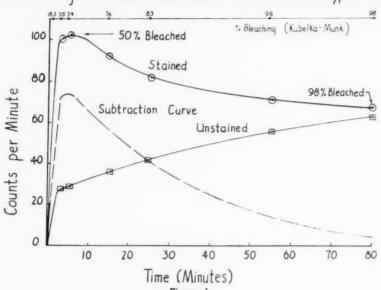
of this discussion we will regard brighteners as a laundering aid which differs from commonly used laundry bleaches.

Without attempting to come up with a carefully worded and necessarily technical accurate definition of a brightener, let us say that a brightener is a chemical which, during the washing cyclé, can become substantive or adhere to the cloth as a "dve would, and thus imparts a new degree of brightness to the cloth by virtue of its ability chemically to generate visible radiation. This radiation

tends to make the cloth brighter: hence, we call these compounds brighteners. In this article we will limit our discussion of brighteners to compounds used as ingredients of home laundry detergents and soabs.

. .. What do we mean when we speak of products known as "bleaches"? We define bleaches as home laundry products which aid in the removal of stains and soil from cloth by virtue of their power to oxidize materials. This definition can cover both chlorine and oxygen bleaches. However, in this





article we will deal, for the most part, with chlorine bleaches since they are consumed in both household and commercial laundries in greater volume than any other type bleach.

The importance of both laundry bleaches and brightening agents lies in the fact that they perform a function that is not provided, by any other laundering product, aid or additive. On the other hand, these products are not a substitute for any other laundry product. If bleaches and brighteners function correctly they serve to improve the results of laundering.

What are the various jobs performed by bleaches and brighteners in laundering operations?

Bleach is of extreme importance in laundering as an aid in the removal of soil. Bleach does not compete with soap or detergent in the laundry; rather it complements detergency. Those who state that bleaching is no substitute for good laundering might bear in mind that an even more informative statement would be that good laundering certainly is no substitute for bleaching.

The chemical action of bleaches complements the work of detergents, soaps, and their builders, by helping other laundry products to do a better job, i.e., getting



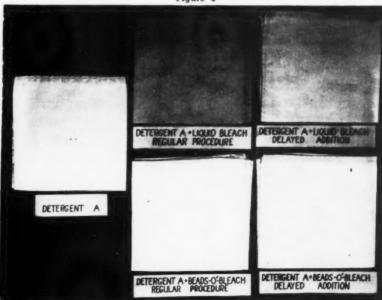
Figure 2. Swatch at left washed in detergent with optical brightener; swatch, right, washed in detergent without brightener.

fabrics cleaner. Bleaches aid in the removal of soil and stains. They

do not simply decolorize stain and soil, as is commonly believed, but actually break up much of the soil on cloth by chemical action. This makes it much easier for detergent or soap products at the same time to do a better job of cleaning. Bleaches help brighteners to do a better job by getting the cloth cleaner or brighter before or at the same time the brightener is being accepted by the fabric. In this way the brightener obtains the best possible results in whitening and/or brightening, since it is not inhibited by soils and stains that detergents or soaps failed to remove.

Current studies on the mechanism of bleaching action involve the use of radioactive tracer techniques. Figure 1 records observations made by following the action of tagged sodium hypochlorite solutions. The upper curve on this chart traces the radioactivity imparted to stained cloth by the radioactive bleach solution. The curve lowest at the left of the chart traces the radioactivity imparted by this same solution to unstained cloth. These two curves approach each other as bleaching nears completion. The dotted line curve simply represents the difference between the results for the stained

Figure 3



cloth and for the unstained cloth. Since a certain amount of activity is imparted to unstained cloth by this solution, the difference between these curves indicates the activity imparted to the stain itself and further indicates what is happening to the stain during the bleaching process.

It may be concluded from these curves that the bleach is actually attacking and disintegrating the stain on the cloth and aiding in its removal. At a point where substantially all of the bleaching has occurred, as measured by visual means, the activity remaining on the cloth is due substantially to the cloth alone and both the colored property of the stain and its actual physical presence have essentially disappeared.

Optical Brighteners

The improvement in product performance attained by incorporation of brighteners in detergent compounds is seen on the two swatches of cloth shown in Figure 2. One of these has been washed with a detergent composition formulated with a brightener, the other has been laundered with the same detergent minus brightener. The tremendous visual advantage of the brightener is obvious.

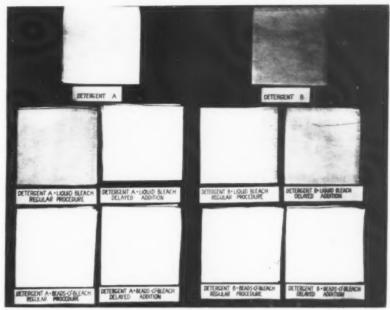


Figure 5

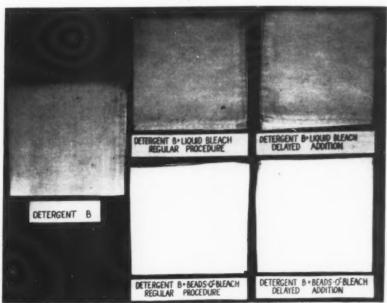
Unfortunately many of the brightening compounds used in laundry detergents are not compatible with bleach solutions and are destroyed in their presence. This problem may be minimized by permitting the brighteners to be adsorbed onto the cloth fibers prior to the bleaching operation. The actual differences in effectiveness achieved by applying bleach in different ways, and by using different brighteners, are demonstrated.

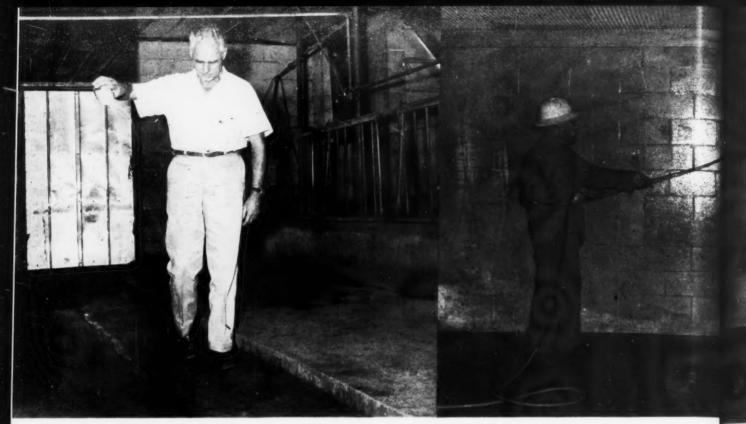
strated in Figure 3 which shows five lightly soiled swatches after treatment. The first swatch on the far left has not been bleached but has been laundered with a detergent formulation containing a good brightener. It clearly shows the effect of the latter. The next swatch has been treated with bleach and the same detergent. Both were added at the beginning of the wash cycle and the bleach has destroyed most of the brightening effect of the detergent compound. The third swatch has first been washed in the detergent solution with the bleach added a few minutes later when the brightener has attached itself to the fabric. A greater combined bleaching and brightening effect is achieved because the loss of brightening power is minimized.

The last two swatches in Figure 3 have been treated with a straight detergent and with a bleach incorporating a completely chlorine stable brightener. The striking whiteness obtained by this treatment would also be accomplished if the chlorine stable brightener were formulated into the detergent composition instead of into the chlorine bleach. Figure 4 is similar to Figure 3 but a dif-

(Turn to Page 126)

Figure 4





"... applications of granular baits in barns provide excellent immediate control of house flies."

"... applications of residual sprays in barns will control house flies for several weeks or longer."

FLY CONTROL

Suggestions on newer methods for control of flies affecting man and animals

The author is assistant chief, Insects Affecting Man and Animals, Research Branch, Entomology Research Division. Agricultural Research Service, USDA



By W. C. McDuffie*

Entomology Research Division U.S. Department of Agriculture Washington, D.C.

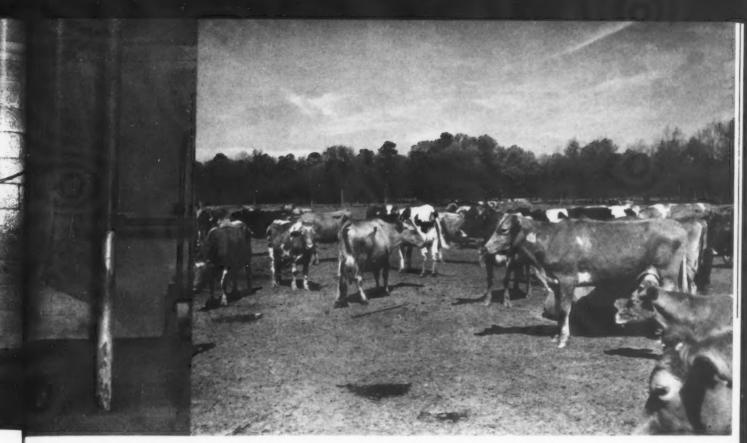
LIES are probably the most important insect affecting the health and well-being of man and animals. House flies are proved carriers of dysentery, typhoid, and numerous other diseases as well as parasites. Stable flies, horse flies, and deer flies are vectors of animal diseases and an-

noy both man and animals. Horn flies are responsible for reducing weight gains and milk production of cattle. Screw-worms and fleeceworms kill and injure untold thousands of animals each year. The annual loss from these flies is enormous.

House flies and stable flies are difficult to control because of their ubiquitous breeding habits. Complete prevention of their breeding is impossible even under the most modern conditions. Nevertheless, reduction of breeding plays an important part in control. Sprays and baits are usually a necessary adjunct to sanitation. However, under certain conditions sprays and baits alone will provide satisfactory control.

Much of the difficulty in controlling house flies and stable flies is our own fault. We know in the dead of winter that billions of these flies are going to be produced in garbage, refuse dumps, poultry houses, barnyards, manure piles, silos, and scores of other sites. Yet we usually wait until flies are a nuisance before taking

^{*}Paper presented at the 45th midyear meeting, Chemical Specialties Manufacturers Association, Chicago, May 19, 1959.



" . . . dry, well-kept barnyards are important in the prevention of fly breeding."

action. Thus, we forfeit our initial advantage and start with a handicap that is sometimes impossible to overcome.

How should we proceed to make the most of our knowledge? The answer is to start fly control early in the spring when the breeding potential is low and cool temperatures prolong larval development. Early control efforts will minimize fly production and enable us to enter the summer season with only a small population which can easily be held in check.

No single method can be relied upon to provide satisfactory control of house flies and stable flies under all conditions. Methods that are effective in one situation may be inadequate or impractical in another. Consequently, the first step is to survey the area and appraise the fly problem. You can then plan an over-all program to combat it.

Practically everyone who discusses fly control stresses the value of good sanitation. We fear it no longer impresses listeners.

In fact, sanitation may be well on its way to becoming a modern version of the "wolf, wolf" fable. Or, to paraphrase Mark Twain's classic comment on the weather— Everybody talks about sanitation but few do anything about it.

Proper location of barns, corrals, and feeding pens will materially reduce the effort required to maintain a high standard of sanitation. They should be on high ground so that neither rain nor subsurface water will provide moisture conditions favorable to fly breeding in soil or manure.

Concrete floors, especially in dairy barns, are essential to good sanitation. They can be cleaned easily and thoroughly, and if the drainage system is correctly designed few flies will be produced. Breeding in stables and pens with concrete floors can be prevented by frequent collection and proper disposal of manure.

Dirt floors in barns, stables, and sheds are favorable breeding sites unless proper sanitary measures are followed. Such floors should be dry and hard-packed, and manure, waste feed, hay, and other litter should be raked up and disposed of twice weekly.

Manure and other wastes should preferably be immediately scattered thinly over fields. Where this is not practicable, they may be piled compactly on the ground or in pits and treated once or twice weekly. You can treat a pile with 11 ounces of borax in 5 gallons of water, but 1 cannot vouch for its fertilizer value after repeated applications. Or, at the risk of hastening development of resistance you can use insecticides.

Poultry houses, especially of the cage-layer type, are frequently sources of heavy house fly breeding. Fly production under such conditions can be kept low by disposal of droppings once or twice weekly or storing and treating with an insecticide. However, many poultry men object to the expense of collection or do not have fields for disposal or storage space on the premises. The only alternative is to treat the manure under the cages.

Sanitation is basically a

problem of the community. Everyone must practice good sanitation in order to keep fly breeding at a low level. An individual's efforts are of little value if his neighbors do nothing.

Use of Insecticides

The most effective sanitation programs cannot be expected to prevent all fly breeding, so insecticides must be employed to complete the job. The extent to which they must be used will depend on the degree of sanitation, the breeding potential, and the insecticide being used. The effectiveness of an insecticide will depend on its initial and residual toxicities and on the degree of resistance in existing fly populations.

Insecticides may be used as residual or space sprays, on cords, or in baits for adult control and as dusts or sprays for larval control. The method of application is a matter of choice based on experience under existing conditions. Many situations may call for several methods of application.

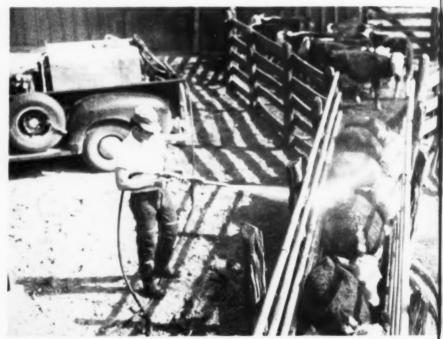
Residual sprays: Application to the ceilings, walls, and other surfaces in barns and other buildings is the most convenient, effective, and economical method of using insecticides for control of house and stable flies. For several years after World War II residual treatments of DDT provided nearly complete control for an entire season. Unfortunately, by 1950 house flies in many areas had become resistant to DDT. Chlordane. lindane, and dieldrin were of only temporary value as substitutes, since flies resistant to DDT also became resistant to these materials after the first or second season of use. Concerted research since 1950 has failed to produce another insecticide approaching the residual effectiveness of DDT during the early years of its use.

Several of the organic-phosphorus insecticides have good residual properties and are recommended for use in all types of

barns and animal shelters. "Diazinon" is currently the most widely used for this purpose. Applications of 50 to 100 mg./sq. ft. in barns are effective for three to eight weeks, depending on local conditions. Malathion and "Ronnel" give satisfactory results for several weeks in many locations. However, in some sections of the country, the flies have become resistant to these three materials and residual sprays provide only immedi-

organic - phosphorus compounds, but none of them has proved as long lasting as "Diazinon." This is also true of "Sevin" and several other carbamates, as well as barthrin and other esters of chrysanthemumic acid. Thus, research so far has not produced a single insecticide that would be a suitable substitute for "Diazinon" if it should prove ineffective this year.

Methoxychlor and lindane are recommended for treatment of



"... spraying to control horn flies results in increased weight gains and greater milk production."

ate control. In many parts of Florida last year resistance to malathion was so great that it was almost completely ineffective. Slight resistance to "Diazinon" was indicated, but it still gave satisfactory control. Whether it will do the job this year remains to be seen.

The addition of sugar to organic-phosphorus insecticides tends to increase and prolong their residual effectiveness in some situations. Such treatments are also effective as baits.

barns and other buildings in areas where flies have not become highly resistant to them. Apparently these materials are still fairly effective against the stable fly, since it has not become highly resistant to the chlorinated hydrocarbons, at least in our test locations. However, both these and the organic-phosphorus insecticides are more effective against house flies than stable flies.

All the insecticides mentioned above, as well as DDT, chlordane, and toxaphene, may be applied as outdoor residual treatments. However, they are effective for only a few days at best, and do not give worth while results, except in certain unusual situations.

Fly cords: In many sections of the country cotton cords impregnated with parathion or "Diazinon" give excellent control of house flies for long periods, but they apparently are of little value against stable flies. The Communicable Disease Center of the U.S. Public Health Service reports that these cords provided season-long

and most practical methods of combating house flies. They can be purchased, ready to use, and can be installed in an average-sized barn in a couple of hours. The installation rate is 30 feet per 100 square feet of floor area.

The Communicable Disease Center has obtained excellent fly control for nine to 16 weeks in dairy barns using cords impregnated with "Ronnel." No commercial product is yet available, but,

0.1 per cent of the insectcide and 10 per cent of the attractant in water. The bait should be sprinkled in narrow strips, at the rate of one gallon per 1,000 square feet, on hard-surfaced nonabsorbent floors and at higher rates on absorbent surfaces. Daily applications may be needed to maintain a high degree of control, but in some situations one or two applications per week are sufficient. Recently the Communicable Disease Center adapted a chicken watering device as a liquid-bait station which required replenishing only every three or four weeks. The bait consisted of a 12.5-per cent sugar-water solution plus 0.1 per cent of DDVP or 1.0 per cent of "Dipterex."

Several types of granular baits are available commercially or may be prepared easily from instructions in publications or on insecticide labels. Perhaps the most widely used formulation is dry granulated sugar containing one or two per cent of the insecticide. Corn meal, grits, sand, and crushed oyster shell are also used as carriers.

Granular baits are suitable for use in or out of buildings and on hard or porous surfaces. Except for granulated sugar, they are also effective on damp surfaces. They may be broadcast by hand or with a shaker-type dispenser. As a rule ¼ pound of a sugar bait or 1 pound of other types is sufficient for use in barns, but heavier applications may be needed outdoors.

Neither liquid nor granular baits are well suited for use in the usual way around feeding pens or poultry houses, but they can be used in bait stations. A paint-on bait is effective in feeding pens. It contains one or two per cent of an insecticide in molasses, corn syrup, or a thick sugar-water slurry and is applied with a paint brush. One application usually remains effective about a week.

Several types of bait stations are useful around feeding pens and are especially well suited for con-



"... screw-worm infestations can be prevented and cured by treating animals with approved sprays and smears."

control of house flies in dairy barns near Savannah, Georgia, and were effective for eight to 17 weeks in pigpens, chicken houses, and homes (1). Similar results have been reported from other areas. In many situations impregnated cords are effective for only six or seven weeks, and in Arizona they failed to give satisfactory immediate control. Our Orlando, Florida, laboratory has found that fly cords are not highly effective under central and southern Florida conditions. Similar variations in effectiveness are to be expected with any method.

Impregnated cords unquestionably provide one of the safest since this insecticide is much less toxic to humans than parathion or "Diazinon" a method might be developed whereby an individual could impregnate his own cords.

Poison baits: Poison baits are very effective against house flies, but of no value against stable flies. Granular or liquid formulations may be used, but all contain an organic-phosphorus insecticide and a food attractant. Insecticides approved for use in baits are malathion. "Diazinon," "Dipterex," TEPP, and DDVP. They may be combined with granulated sugar, molasses, corn syrup, or honey.

Liquid baits usually contain

trolling house flies in caged poultry establishments. One type is best described as a short-handled fly swatter, with the screen portion caked with a bait containing 50 per cent sugar, 46 per cent sand. 2 per cent gelatin or bacto-agar. and 2 per cent insecticide. Such devices are installed by thrusting the handles in soil or manure about five to 10 feet apart. They remain effective for several weeks unless wetted by rain or sprinkling. Granular baits can be placed on trays and liquid baits can be used in chicken watering devices.

Baits have several features that recommend them for house fly control. They are relatively inexpensive, quickly and easily applied, and provide immediate reductions in fly populations. Some types must be applied daily or several times weekly, but others give control for several weeks or more.

In Florida and several other areas flies have developed physiological and behavior resistance to malathion baits. In other words, they can consume a large amount of bait without dying. Some flies find the bait unacceptable and avoid it. However, in these same situations "Dipterex" and "Diazinon" baits gave excellent control despite slight resistance to these insecticides,

Space sprays: Satisfactory control of flies can be obtained by spraying insecticides into the air in barns and over adjacent premises. However, space sprays must be repeated daily in most situations.

For open barns, sheds, and premises a power mist sprayer is required to cover the area quickly and thoroughly. Speedy application of a large volume of spray will insure maximum control, whereas casual application of small amounts may only cause flies to disperse. Properly applied sprays will consistently give better than 90 per cent immediate control, but, as a rule must be reapplied after 24 hours.

Where flies are not resistant to the chlorinated hydrocarbons,

DDT, lindane, chlordane, and methoxychlor are effective as space sprays. Several of the organic-phosphorus insecticides and synergized pyrethrum are highly effective against both normal and resistant flies. Unfortunately, malathion is the only organic-phosphorus material now approved for use as a space spray.

Larvicides

Larvicides: Larvicides may be used to control fly breeding in garbage, collections of manure, and various problem areas where other methods are not effective or feasible. However, to retard the development of resistance, they should be employed only on an emergency basis and not as a regular part of the fly-control effort.

"Diazinon" is the most effective fly larvicide from the standpoints of both initial and residual effectiveness. From three to six ounces per 1,000 square feet will usually kill existing larvae and prevent breeding for about one week. Emulsions, dusts, or oil solutions may be used. Malathion, "Ronnel," and parathion are effective initially, but are not so durable as "Diazinon." Where flies are not resistant to the chlorinated hydrocarbons, lindane, chlordane, aldrin, and dieldrin will give satisfactory control for several days or more.

Feed Additives

Several workers have reported that the addition of "Polybor 3" (disodium octaborate tetrahydrate) to chicken feed will prevent fly breeding in the droppings. However, the amount necessary to prevent breeding leads to excessive boron residues in the meat and eggs and renders the manure unfit for many uses. Therefore, this material does not seem to be the solution to the fly problem in poultry houses, but further research may produce a material that would be an acceptable food additive.

Traps of various kinds have long been used in fly control. Although they are of value in some situations, none of them, to our knowledge, has proved capable of controlling house flies or stable flies under average conditions. If a powerful attractant could be found, traps might provide an effective means of control, as in the case of several of the fruit flies.

Soldier Flies

For many years farmers and research workers have observed that house flies seldom breed in manure that is heavily infested with soldier fly larvae. In some locations both species occur but in slightly different environments. Therefore, it should be possible to make the entire environment suitable to soldier fly larvae. Studies along this line might lead to an easy procedure for utilizing the soldier fly for house fly control.

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Insect Diseases

In recent years there has been a growing interest in the use of pathogenic organisms for controlling insects. Much progress has been made in utilizing several of these organisms for the control of crop pests, but little effort has been made to find diseases for use against flies, mosquitoes, or other pests of man and animals. This is a potentially fruitful area for future research. We believe that diseases exist which could be utilized for the control of flies as well as other pests.

Biting Livestock Flies

Horn flies, stable flies, horse flies, deer flies, and mosquitoes are serious pests of cattle and livestock in nearly every section of the country. Besides annoying livestock by biting and sucking their blood, some of these species are known to be or are suspected of being vectors of livestock diseases. Except for horn flies, current methods of control are inadequate. More effective methods for controlling these pests or protecting livestock from their attack would mean millions of dollars more income to growers.

> Adult horn flies stay on ani-(Turn to Page 122)

no Mintalia

REFRESHING MINT FRAGRANCE FOR YOUR CHEMICAL SPECIALTIES

Here's a fine, long-lasting fragrance for your chemical specialty items. It efficiently masks the heavy odor of the chemical and, at the same time, adds a pleasant, sales appealing fragrance to your product. Why not order a trial pound for your own tests!

MINTALIA IS PERFECT FOR:

Liquid Soaps and Detergents-use 1/4-1/2 oz. to 1 gallon

Air Deodorants—use 2-3 ozs. to 1 gallon (50% Alcohol)

Paradichlorobenzene—use 1/2 to 1% Insecticides—use 1/4 to 1/4 oz. to 1 gallon Aerosols—use 1/4 to 1/2 of 1%

1 pound \$3.75 5 pounds \$3.50 per lb.





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POLYMERS FOR BUFFABLE AND NON-BUFFABLE FLOOR POLISHES

NEOCRYL A234U

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- Will not yellow, darken or embrittle with age.
- Excellent film clarity and depth of gloss.
- High degree of compatibility with waxes and resins.

NEOREZ ST

For excellent leveling in floor polishes, even on problem tiles. NeoRez ST is a

new polystyrene emulsion well worth your prompt consideration.

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- Promotes leveling and gloss in both buffable and non-buffable polishes.
- Good balance between water resistance and removability.

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Surfynols are unique ditertiary acetylenic glycols which are nonionic, nonfoaming surface active agents. Below are five areas where Airco Surfynols are being used. Perhaps they suggest a use for you.

WEITING – Surfynols 102 and 104 are superior wetting agents. A .1% solution of Surfynol 104 in water has a Draves wetting time of 8 seconds. Even lower Draves times result when Surfynol 104 is combined with surfactants having higher Draves times. Surfynol 104's excellent wetting and defoaming properties provide a basis for using it in paints, metal cleaners, rinse-aid formulations, and insecticides.

DEFOAMING – Surfynol 104 is recommended as a defoamer for aqueous systems. This white waxy material is also available in two liquid forms: Surfynol 104E (50% active in ethylene glycol solution) and 104A (50% active in 2-ethyl hexanol). At about .2% concentration, Surfynol 104A or 104E cuts foam in such systems as emulsion paints, paper coatings, and insecticide formulations.

investigate surfynols if lower cost surfactants have not proven satisfactory. Airco's experienced technical representatives are always ready to assist you. For on-the-spot help or information call or write. DISPERSING – Surfynol TG fits the requirements of a nonionic dispersant for emulsion paints and other emulsion and water-based systems. TG is an 83% active mixture of a Surfynol and an alkyd phenyl ether of polyethylene glycol in ethylene glycol solution. It promotes increased hiding power and better color development in emulsion polyvinyl acetate, acrylic or butadiene-styrene paints.

viscosity control – Surfynol 82 (dimethyl octynediol) is most active as an anti-gelling agent. In addition to its use in shampoos, Surfynol 82 is recommended for viscosity reduction in vinyl plastisols, aqueous starch solutions, and flexographic inks.

volatile wetting – Surfynol 61 (dimethyl hexynol) is a volatile wetting agent. Surfynol 61's volatility permits easy elimination from a system after its work is done. One example is in glass cleaning formulations where Surfynol 61 helps solubilize dirt but leaves no film on the glass after cleaning.



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EPOLENE "E"



Epolene POLYETHYLENE WAXES

Waxes Bright When Others Wane

It's no mere play on words. Tests show that the gloss of Epolene based floor polishes actually increases with wear. On asphalt tile, for instance, the gloss of a typical Epolene polish rated 50%* immediately after application—an excellent rating for any floor polish. Following a normal period of wear and rebuffing, however, its gloss had increased to 65%.

Readily emulsifiable, Epolene "E" is supplied in small, rice size pellets — convenient to handle and easy to process. When it is incorporated into polishes it provides excellent durability, slip resistance and resistance to water spotting. Non-discoloring, Epolene "E" also imparts an unusual and lasting depth of color to floor surfaces.

To assure the superior performance of its polyethylene waxes, Eastman maintains a precise and rigid system of controls throughout the manufacturing process. Polish manufacturers can thus standardize on formulations and procedures with complete confidence in batch to batch uniformity.

To help manufacturers in taking full advantage of the outstanding properties of Epolene "E", Eastman maintains an extensive technical service laboratory in Kingsport, Tenn. Through this laboratory polish manufacturers are offered expert assistance in formulations and manufacturing techniques.

For samples and further information, write Eastman Chemical Products, Inc., subsidiary of Eastman Kodak Company, Chemicals Division, Kingsport, Tennessee.

*With a 60° Gardner Glossmeter

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Chicago; Cincinnati; Cleveland; Framingham, Mass.; Greensboro, N. C.; Houston; New York City; St. Louis. West Coast: Wilson Meyer Co., San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

Automotive Specialties . . .

Which of current products will be museum pieces in next ten years?

By A. F. Connolly*

Simoniz Co. Chicago

F profits are to be made from chemical specialties, they have to be sold. In his own area of sales, everyone naturally has to ask himself: "Are today's products going to be saleable next year . . . five years from now and ten years from today?" This discussion is concerned with sales of automotive products. Although my firm, the Simoniz Company, is deeply involved with the automotive field and automotive products . . . this is an area which is in many ways familiar and of interest to nearly every one. One out of every six businesses in America is involved with the automotive business. One out of every five people is employed in some part of the automotive business. And, of course, all of us own automobiles and buy automobile parts and accessories.

So when we ask the question, "What automotive products will be museum pieces in 10 years?" we are in an area that concerns us as users, as well as manufacturers, of products of the automotive industry.

Some automotive products are positively destined to extinction in the foreseeable future. In other cases, extinction is anybody's guess. Here are some specific examples: According to Detroit sources, the automobile chassis requiring no grease lubrication is a sure thing on at least two 1960 model cars. And, according to the same sources, it's possible that within two or three years nearly all new cars will have a lube-free chassis. A non-lubricated lifetime fabric

bearing has been perfected, according to Detroit reports. It is claimed that this bearing offers greater fuel economy, lower first cost, lower replacement cost, and of course, no lubrication. The lubrication alone would save motorists only about \$18 a year, but with the other savings, this might be a saleable economy package. This means no car "greasing" will be necessary on these new cars. Thus, inevitable sales declines appear to be ahead for the automobile chassis lube market.

This year many car manufacturers are recommending 4,000 to 5,000 mile intervals between motor oil changes. Only ten years ago, 1,000 mile recommendations were commonplace. Obviously, if new car owners follow these recommendations, motor oil sales in a few years could be 75 per cent to 80 per cent less than those based on 1,000 mile oil changes.

In this case, however, representatives from the oil companies tell us that stretched out oil drain periods can cause expensive repair bills for many motorists. In fact, the car companies recognize the facts of life in their owners' manuals where they qualify the four and five thousand mile drain periods with the statement that 1,000 to 2,000 mile oil changes are a must if the car is driven on short trips in traffic. Most of us drive our car in city traffic. So in the case of motor oil, although there are influences which appear to make this product needed in declining quantities in the next ten years—it also appears there are just as many good reasons to support adequate motor oil lubrication for future cars.

We hear rumors from Detroit about progress being made on closed cooling systems on today's piston engines which would be factory sealed. This development would eliminate the need for antifreeze and other radiator chemicals.

Gas Turbine Engines

And, we hear and read even more about the progress being made in the development of gas turbine engines for cars. Without going into the mechanical fundamentals of turbine engines, it suffices to say that the gas turbine is a greatly simplified power plant with moving parts amounting to but a fraction of those in conventional piston engines. The turbines have no carburetion system, a greatly simplified electrical system and they are air cooled.

Apparently the gas turbine engine for passenger cars will not need an oil filter, nor an air filter of the present type. However, in the past the filter manufacturers have shown ingenuity in developing new uses for their products. They expanded to air filters and now are making a good case for fuel filters. So, although oil filters could disappear as the result of the turbine engine, it is probable that we will see the development of new uses for filters.

In addition to the speculation about gas turbine engines, a considerable number of words have been written in the trade concern-

^{*}Paper delivered at the 45th midyear meeting of Chemical Specialties Manufacturers Association, Chicago, May 19, 1959.

ing the free piston turbine engine for passenger cars. According to Detroit, the gas turbine engine would require one spark plug and because the free piston turbine operates on the diesel principle, it would require none. Since nearly all domestic cars now use either six or eight spark plugs, we can foresee the possibility of a decline in spark plug sales in future years.

Because the automotive type of free-piston turbine will probably have at most only two pistons, this would reduce the sales of piston rings. The gas turbine engine would use no rings. The gas turbine, with no cooling system, would eliminate sales of thermostats and sharply cut sales of fan belts. The turbine engines undoubtedly would sharply cut sales of high octane gasoline and would demand lower quality gasolines or possibly even kerosene or a distillate.

Gas turbine engines very probably would not require dual exhaust systems so it's possible that muffler sales could decline. Depending on ultimate turbine power plant design, it's possible that automatic transmissions would be eliminated as we know them today, thus sales of automatic transmission fluid would fall. It's also possible that rear axle lubricant sales would disappear.

New Car Finishes

Since the introduction of 1959 model cars, most of us have read or seen new car advertising which has made the claim that the new car finishes need not be waxed or polished. Excuse me for going "commercial" but, since car waxes and polishes, as packaged chemicals, have special interest to us, I would like to dwell on this claim for a few minutes.

General Motors has given their new acrylic lacquer, called "Magic Mirror" finish, 2 prominent place in individual car ads, as well as "institutional" Fisher Body ads featuring this new paint. They have stated that "1959 GM cars need no waxing or polishing for up to three years." Similarly, Chrysler claims that their new melamine "super enamel" finishes can go up to three years without waxing. And Ford has been claiming in their advertising that their new melamine "Diamond Lustre" enamel need never be waxed.

These are strong claims. They are claims made by large companies of known reputation. However, we are inclined to believe these are new car finishes which are *designed* to give high performance, but in fact, have a long way to go before they can ignore damaging road and weather effects.

Waxers' Views

We have talked with many people from coast to coast who own businesses that do professional car waxing. These men are probably best qualified to render practical opinions on the condition and care of car finishes. They work intimately with car finishes of all ages and types. These professional car waxers tell us that even the new 1959 cars pick up traffic film and road haze, as well as tree sap, tar and bug stains. Those in certain areas tell us that blowing dust, ocean salt spray, industrial soot and road chemicals such as rock salt and calcium chloride are still mighty tough on car paints. This was supported recently when Mr. J. D. Pickens, director of DuPont's Flint, Mich., laboratory said the following about the new acrylic lacquers made by his company and I quote, "Based both on car tests and exposure panel results, it has been observed that dirt and traffic scum do not adhere as readily to our acrylic lacquer as to other conventional finishes. It has been observed that washing and polishing is a less difficult task than with conventional finishes. However, there is no miracle ingredient in our acrylic lacquer which automatically repels dirt and scum from its surface and thereby makes washing or polishing unnecessary."

Mr. W. H. Suter, paint technical specialist with the Ford Motor Company, recently said: "A coat of polish will make it easier to clean traffic film, industrial fallout, tree sap, etc., from your painted surface, and therein lies its value, rather than to prolong the life of the enamel."

Owners Prefer Wax

And Mr. Weslager, of Du Pont Specialties Sales and Co-Chairman of the Program Committee of this meeting has said in a release to Super Service Station magazine: "Now, the car owner who applies wax to his car for what he feels is paint protection will doubtless continue to wax an acrylic lacquer finish. Although there may be less need for wax, there is certainly no harm in applying it. There is no question that the presence of a wax film facilitates dusting the car and the slippery characteristics of the wax, in addition to imposing an optical illusion of depth, helps to retard the formation of traffic film and the collection of dust. The car owner is convinced that a wax film on his car helps him to keep it clean, and a survey of 2,000 persons who used polish or wax indicated that 35 per cent of the respondents used wax because they believed it would preserve and protect the

"If a car owner experiences minute scratching on his car finish from rubbing against shrubbery or from sandy particles in the air, he will doubtless continue to resort to auto polish or a mildly abrasive cleaner to remove these blemishes. Although acrylic lacquers are basically harder than conventional lacquers, certain types of minor scratches may be expected on any car. Such scratches may not necessarily cut through the paint, but they tend to interfere with the uninterrupted smoothness of the finish, which contributes to its gloss.

"In short, it is to be expected that acrylic finishes will require less use of polish for the purpose of removing chalked pigment, but the other three reasons for polishing or waxing an automobile will still remain valid in the eyes of many car owners. These are: 1) to remove traffic film and road haze, 2) to give protection to the finish against sunlight and moisture, and 3) to remove minute scratches and blemishes from the car finishes.

"There is still another element that enters the picture-the human factor. The owner of a new car seems to enjoy doing something to give expression to his pride of ownership, and he evidently derives satisfaction from applying polish or wax to his car whether or not there is actually a need for it from the viewpoint of the paint technician. Surveys indicate that the new or relatively new car has always been subject to more polishing than older vehicles, even though the latter may need it most. Of 600 car owners who did not use any polish or waxes, 20 per cent gave as the reason that their cars were too old. Cars that are polished most frequently are those one and two years old, and these have always had less need for polish than the older weathered vehicles. It may be expected that owners will continue to fall into this pattern despite the lesser need for polishing the new acrylics."

New Cars Chalk

The various paint manufacturers claim that the new finishes resist the action of sun, air and moisture longer . . . in other words that they won't chalk from oxidation as quickly as do older paints. Yet for the 25 per cent of all U.S. cars which stand out in the elements 100 per cent of the time, all evidence points to the fact that chalking may occur within the first year. And, it appears that chalking and fading will eventually occur on all new finish cars.

In the Simoniz laboratories, we have carefully tested and compared these automotive paint developments for nearly three years. The controlled technical information gathered by lab testing directly supports outdoor road and weather testing on late model stock



American cars which we conducted. These were our conclusions:

- The protection and appearance advantages of waxing of new car finishes have been positively confirmed by test.
- It is necessary to wax the new car finishes because they ultimately chalk and grow dull. The two elements most destructive to car finishes – sun and water—will continue to be a problem to motorists.
- 3. Controlled gloss measurements of the new acrylic finishes show that their gloss is lower to begin with than that of the older nitrocellulose lacquers. Waxing improved the gloss of both types but acrylics need the wax improvement even more than the older finishes. Thus, waxing positively improves the appearance and gloss of both new acrylic lacquer and melamine enamel finishes.
- Automobile cleaners and polishes will still play an important part in maintaining new car finishes. We found that various stains, chemicals, droppings and road dirt just cannot be removed by ordinary washing with

water and detergents.

 None of the major national brand cleaners, polishes or waxes are harmful in any way to the new car finishes.

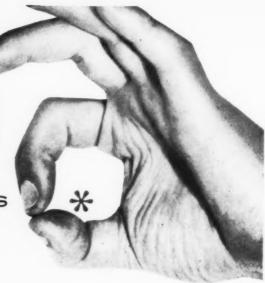
So-scientific tests as well as car owners, dealers and professional waxers tell us that the new car finishes need cleaning, polishing and waxing. With our knowledge of weather conditions and ever-increasing road hazards to car finishes, we forecast that even with luture improvements in enamels and lacquers the need for car waxing will not decline, but may even grow! In this case, the customer will have to make the final decision.

Summary

When we consider, "What automotive products will be museum pieces in 10 years," we find a confusion of fact and fancy. Where can we draw the line? Certain products may be things of the past ten years from now. Other products may run into problems only if the turbine engines become a reality. They are today a big question mark. Still other products appear to face various future problems much like those faced by cigarettes and cola drinks over the past 50 years-but which appear to be destined to continued use and growth.

We are pledged to watch (Turn to Page 127)

AT YOUR FINGER TIPS





a library

of vital technical data

to guide insecticide formulators,

manufacturers, PCO's and sanitarians



Designed to aid makers of pesticides in virtually every area of application . . . in the home, food handling and processing, grain storage, post-harvest, dairy, livestock and aerosols, etc.

Included are fool-proof, use-proven basic formulations that contain Pyrenone[†], Fairfield's own non-toxic piperonyl butoxide and pyrethrin insecticide base.

Here is a partial list of Fairfield technical aids to help you "tailor make" a more effective, more economical, more profitable product.



- ☐ House & Garden Products
- □ Dairy Sprays
- ☐ Residual Concentrate
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- ☐ Fly Repellent Combinations
- ☐ Industrial Type Aerosols

* Ask your Fairfield representative for these and other FREE aids, or write.

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Branches in principal cities. In Canada: Natural Products Corporation, Montreal and Toronto.



HE pleasing appearance of a waxed floor depends on two factors: deep brilliant lustre and good leveling properties of the film. If solvent type floor waxes are applied to linoleum, gloss and even distribution of the wax are accomplished by buffing. Water dispersion floor waxes are intended to dry by themselves to a

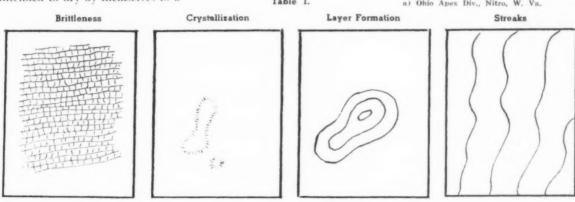
glossy and uniform film in much the same manner as lacquers.

The leveling of floor waxes frequently presents a problem in today's complex formulations. Every compounder is familiar with such undesirable phenomena as embrittlement, crystallization of resins, building up of several layers,

and streaking. (See Table 1, below).

Embrittlement occurs in styrene emulsion or shellac dispersion floor products. Since styrene polymer is not a film former per se, it requires a plasticizer. Satisfactory results are usually obtained with dibutylphthalate and an addition of "KP 140" (a) tributoxyea) Ohio Apex Div., Nitro, W. Va.

Table 1.



For That Deep-Gloss Look







Formulate Finer Polishes With Dow Corning Silicones

Give your polishes that extra "sell" . . . simply by incorporating adequate amounts of Dow Corning Silicones in your formulations.

In a highly competitive market, you can provide numerous advantages for the end user — including deeper, richer gloss — through the use of Dow Corning Silicones. Ease of application is a benefit customers remember the next time they buy. Silicones also help your polish spread and wet the surface, resulting in better and faster film formation. And, of course, silicones provide oxidation resistance and water repellency surpassing any other polish ingredient . . . which means better and longer lasting protection for autos, furniture, and appliances — virtually all household items of wood, glass, or metal.

In summary, silicones in your polish assure a quality look, an effortlessness of application, a true durability. All the things that bring your customer back for more!

Another point to remember: you gain again when you say "silicones" on your label. People are increasingly aware of the protection silicones provide, and you cash in on this prestige.

For the latest and most complete technical information on Dow Corning Silicones for different types of household, industrial, or specialty polishes, contact our nearest branch office or write Dept. 2521.



Your nearest Dow Corning office is the number one source for information and technical service on silicones.



Dow Corning CORPORATION

MIDLAND, MICHIGAN

TLANTA BOSTON CHICAGO CLEVELAND DALLAS LOS ANGELES NEW YORK WASHINGTON. D. C.

thylphosphate as dispersing agent. Brittleness of a shellac film may be remedied by addition of a plasticizer to the shellac dispersions. Suitable plasticizers include glycoboroborate, glycols, "Stysolac" (b) or "Benzoflex P-600" (c).

Crystallization in a floor wax film may be caused by lack of plasticizer, by incompatibility of the resin components, or by faulty proportioning of the different resin dispersions. The remedies for these shortcomings are obvious.

Both embrittlement and crystallization are easy to overcome. They have been mentioned mainly to make this survey complete. The real leveling problem is caused by the formation of several layers or streaking

When water emulsion floor waxes first became popular 10-20 per cent shellac dispersions were added to the carnauba wax emulsion. This was done not only to increase gloss and hardness of the film but also to utilize the excellent leveling properties of shellac.

With the introduction of synthetic waxes, and polymer resins into water dispersion floor waxes, formulators had to find new leveling agents. Two main categories emerged: surfactants and alkali soluble or water dispersible natural and synthetic resins. No general rule can be given as to whether it is advisable to use surfactants or resins or both, as leveling agents in a certain formula. As the following discussion of individual agents will show, every product has its advantages and its limitations.

While doing a good leveling job, a material may at the same time affect water or spot resistance of the film, darken the color of the finished product or influence its stability. Only practical tests can determine the compatibility of different components as well as the choice of a suitable leveling agent. But considerable time and work can be saved by studying in advance the known characteristics of

a product to be combined with other components in a formulation.

Surfactants

Surface active agents increase wetting, penetrating and dispersing properties of wax or resin emulsions. By this action they contribute to the forming of an even film or good leveling properties. Some surfactants are added to the molten wax to speed up the thinning of the wax dispersion. Others take the place of morpholine, AMP or TEA-oleate and act as complete emulsifiers. amount of surfactant needed as leveling agent or emulsification accelerator varies between 0.5 to two per cent.

Aerosol OT" (d) dioctylester of sodium sulfosuccinic acid, an anionic detergent of white fatty appearance is recommended as a wetting and leveling agent for polyethylene emulsions in an amount of 1-1.2 per cent.

"Tergitol NPX" (e) is a nonionic surface active liquid of moderate viscosity. Added to wax and resin emulsions at the rate of

0.5 to one per cent, it produces excellent leveling properties. However, while increasing freeze and thaw stability it reduces the water and spot resistance of the film to a certain extent. Foaming may develop but can be controlled by the addition of a defoaming agent. The correct amount to be used for best results with a minimum of undesired side effects must be established by practical tests.

"Igepal CO-630" (f) resembles "Tergitol NPX" in its properties. It is a polyoxyethylated nonylphenol and a water white liquid of medium viscosity.

"Tergital No. 4." (e) sodium tetradecylsulfate improves the leveling properties of wax emulsions. Added to the molten waxes just prior to emulsification it speeds the thinning down of the wax in water dispersions. This surfactant is recommended especially for emulsions of waxes other than carnauba. An excessive amount of "Tergitol No. 1" will render the emulsion more translucent but also more viscous.

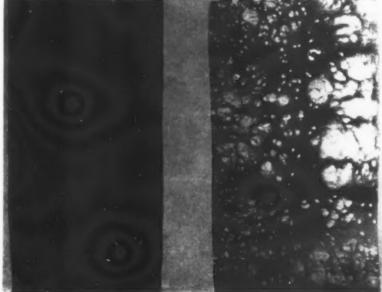
A suggested formulation contains:

d) American Cyanamid Co., New York, (c) Union Carbide Chemicals Co., New York,

(f) Antara Chemicals, Sales Division of General Aniline & Film Corp., New York.

Figure 1. Improvements in gloss and appearance in a commercial emulsion type floor wax containing "FC-134" in a concentration of 0.01% by weight

Photo courtesy FC applications laboratory, Minnesota Mining and Man



With "FC-134"

Without "FC-134"

b) Paul & Stein Bros., Inc., New York.
c) Tennessee Proucts & Chemical Corp., Nashville, Tenn.

Shanco Resins in Floor Polishes

Styrene Copolymer Emulsions use Shanco L1001

Because it is clear and brilliant; it provides a clear, smooth film and mirror surface with good leveling qualities when added to emulsion waxes — L1001 gives the highest gloss per pound, per dollar of any leveling agent made.

Acrylic Copolymer Emulsions use Shanco 334

A specific for acrylic emulsions and in steadily increasing demand—excellent leveling, and brilliant clarity.

High Wax Emulsions use Shanco L1135

Used in hard drying floor polishes from styrene and styrene copolymer emulsions. Gives fine gloss; heat stability, excellent waterspot resistance and a controlled degree of permanent removeability.

Each resin is custom built to do the best job in its field. Samples and literature are available. Contact our local representative or write direct to

SHANCO Plastics & Chemicals Inc.

TWO MILE CREEK ROAD . TONAWANDA, NEW YORK

	pounds
Carnauba wax	20
Oleic acid	4
"Tergitol No. 1"	0.75
Morpholine	2.5
Water	120

"Emcol K 150" (g), a long chain fatty derivative of carboxylic acid is an effective leveling agent. According to its manufacturer it has been developed principally to overcome one of the typical drawbacks of surfactants: formation of films subject to water spotting. Combined with volatile amines such as morpholine or AMP, "Emcol K 150" leaves a water resistant film after volatilization of the amines. High gloss polishes with excellent leveling properties and good spotting resistance have been formulated with 10 to 15 per cent (based on solids content) "Emcol K 150." In the form of its amine salt "Emcol K 150" plasticizes films of high resin content, where embrittlement sometimes may lead to wrinkling of the wax film. However, the question of compatibility must be answered by testing.

"FC 128," an anionic and "FC 134," a cationic surface active agent, are described by the manufacturer (h) as consisting of a long fluorinated tail attached to a solubilizing group. Additions as low as .01 per cent of these fluorochemical surfactants may improve the leveling properties of floor waxes

and reduce their tendency to streaking.

"Emulphor ON - 870" (f) is polyoxyethylated fatty alcohol and has the appearance of a white fatty substance. It was marketed in Germany in the Twenties under the trade name "Emulphor O" and was the first surface active agent to be offered as a complete emulsifier. This nonionic yields a wax emulsion of slightly better leveling properties than the morpholine oleate system. An emulsion can be made by adding five to seven per cent "Emulphor ON-870" based on the weight of the wax. However, for satisfactory leveling it is necessary to add a leveling resin emulsion. (See Figs. 1 and 2)

Floor wax formulations for household use usually incorporate 80 to 93 per cent of resin dispersions. If proper combinations are selected from the large number of mutually compatible resins, leveling can be controlled. However, other requirements such as color, water resistance, and removability are equally important and their consideration makes the task more difficult.

"Durez 15546" (i) is especially suitable for formulation with vinyl or styrene resin dispersions. A non spotting water resistant film is formed provided the dispersion has been prepared with a volatile amine such as am-

monia. If a very pale film is desired "Durez 15546" can be used only in limited quantities owing to its amber color.

"Shanco" (j) L-1001, L-1090, L-1127, or L-1135 yield good gloss and leveling properties in combination with styrene copolymers. The range of melting points available in this series enables the formulator to obtain films of any desired degree of hardness or toughness. For formulations with acrylic polymers the manufacturer suggests "Shanco 334."

"Waterez 1550 and 1551"
(k) combined with acrylic emulsions yield a product of excellent spreading properties provided the dispersion is made with "Igepal CO-990" (e) and ammonia, with "KP 140" as an auxiliary dispersant and foaming agent. "Waterez 1582" can be dispersed with ammonia only.

A formulation incorporating 12 per cent "Waterez 1551" and having a pH of 8.7 has the following composition:

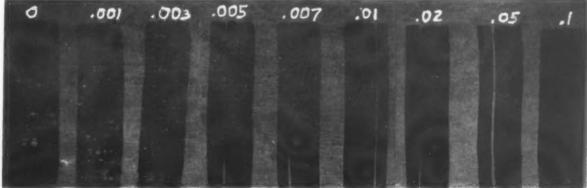
	Parts
Waterez 1551"	100
"Igepal CO-990"	5
Ammonia 26 Be	9
"KP 140"	4
Soft Water	782

A typical combination of 15 per cent "Waterez," 15 per cent wax, and 70 per cent dispersion (Turn to Page 122)

 (j) Shanco Plastics & Chemicals, Inc., Tonawanda, N.Y.
 (t) Reichhold Chemicals, Inc., White Plains, N.Y.

Figure 2. Decrease in streaking as a function of concentration of "FC-134" in a commercial emulsion type floor wax.

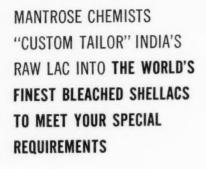
Photo courtesy FC applications laboratory, Minnesota Mining and Manufacturing Co.



Concentrations in per cent by weight in emulsion

 ⁽g) Emulsol Chemical Corp., Chicago.
 (h) Minnesota Mining & Manufacturing Co.,
 St. Paul.

f) Antara (i) Durez Plastics Division, North Tonawanda, N. Y.

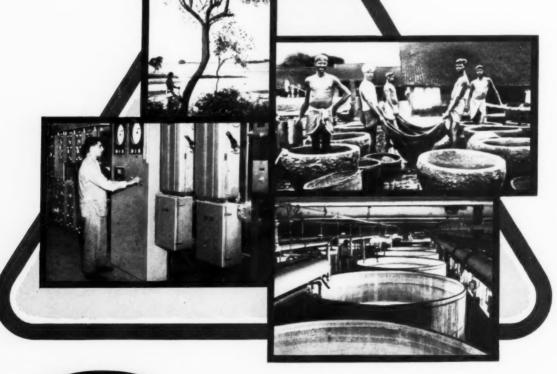


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AEROSOL STERILANTS...

Method for testing ethylene oxide content of products intended for degerming heat sensitive objects

By E. O. Haenni* and R. A. Fulton**

Entomology Research Division, U. S. Department of Agriculture Beltsville, Md.

HE aerosol filler is herewith being offered a method for testing the ethylene oxide content in the new aerosol sterilants intended for degerming heat sensitive objects. Such formulations are currently being offered commercially in 12 ounce cans to physicians and hospitals. The Federal government is said to be preparing specifications for these sterilants for civilian and military use.

Formulations of ethylene oxide with propellants 11 and 12 were developed by the Pesticide Chemicals Research Laboratories of USDA for the Biological Warfare Laboratories (1). This report describes means of sampling and determining the ethylene oxide content in the liquid phase of ethylene oxide-chlorofluorohydrocarbon formulations.

Because of the great difference in the molecular weights and the vapor pressures of the components, the composition of the vapor phase of such formulations differs considerably from that of the liquid phase with which it is in equilibrium. Accordingly, a sample of the liquid phase drawn for analysis should be utilized completely or almost completely, if the results are to be accurate. The sampling device should be light enough to per-

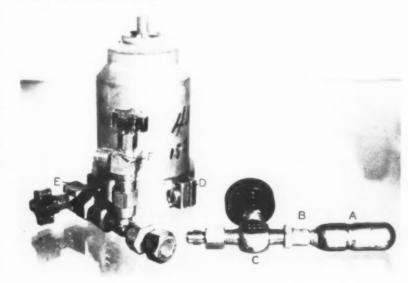
mit weighing on an analytical balance, strong enough to withstand a pressure of 100 pounds per square inch, and capable of retaining gas at this pressure without loss. It would also retain a vacuum of 0.1 mm, or less of mercury. A sampler has been devised that meets these criteria. The analytical procedure is an adaptation of Lubatti's technique (2).

Apparatus

Sampling apparatus: (Figure 1) The neck of an empty carbon dioxide cartridge (A) of approximately 10-ml. capacity was silver-soldered to a 1/8-inch IPT

brass adaptor (B); a 1/8-inch IPT needle valve (C) was screwed into this adaptor, with plastic sealing compound on the threads to provide an airtight sampling unit. The valve outlet terminated in a 1/4inch flared fitting. A holder and puncturing device is mounted on a pressure can. The brass clamping pieces (D) were made to fit the larger aerosol cans, but by cutting similar semicircular pieces of brass or plastic the holder may be used for any can size. The combination valve and puncturing device (E) is commonly used in the refrigeration trade. A needle valve (F), connected to the system with a tee

Figure 1. Sampling apparatus for determination of ethylene oxide in formulations with chlorofluorohydrocarbons.



^{*}Now with the Food and Drug Adminis-tration, U. S. Department of Health, Educa-tion and Welfare.

**This work was supported by contract with the U. S. Army Chemical Corps., Fort Detrick, Frederick, Md.

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Bell Savings Building, 79 West Monroe Street, Chicago 3, Illinois ANdover 3-3808 fitting, was used for attachment to the vacuum line to eliminate the air prior to sampling. Ordinary flared-fitting copper inserts were used in the female unions to provide a softer seat and insure gas tight connections when the apparatus was assembled for use. All the fittings were 1/4-inch brass flared units that may be purchased from any refrigeration supply firm.

Vacuum pump. Any efficient pump producing a vacuum of 0.1 mm. or less of mercury is suitable.

Pipette assembly: A 10-ml. pipette was mounted vertically and equipped with a rigidly supported needle valve or stopcock connected to the upper end to control drainage. A small vial with a one-hole stopper or a short piece of connecting rubber tubing was slipped over the lower end of the pipette to prevent changes in concentration in the residual reagent when not in use.

Reaction flask: A one-liter suction flask was equipped with a one-hole rubber stopper through which the stem of a small separatory funnel was inserted to a point well below the side outlet of the flask. The stopper was coated with a thin film of silicone grease. Silicone grease may also be necessary to secure a vacuum-tight stopcock on the funnel. The side arm of the flask was connected by means of silicone-grease-coated, thick-walled rubber tubing in as close a union as possible to a needle valve, which was provided with a short, handtightened coupling to fit the sampler outlet. Some flexibility in the union is desirable.

Reagents

Saturated MgBr₂·H₂SO₄ solution: To a solution of 30 mL of concentrated H₂SO₄ in 310 mL of water was added 3 pounds of MgBr₂·6H₂O. The mixture was gently warmed until the salt dissolved, and then was cooled to room temperature. A small quantity of the salt separated and settled to the bottom of the container. The solution was approximately 1 N in H₂SO₄.

Table I. Recovery of Ethylene Oxide' from Sampling Device

Chlorofluorohydrocarbons in	Ethy	ylene Oxid	le		
sample (mg.)	Present	Found Rec	overy Resi	dual Gas	
	Mg.	Mg	%	%	
None	165.8	163.4	98.6	1.8	
	232.5	234.3	100.8	1.1	
CCI_F 626.0 + CCI_ 718.4	226.7	221.5	97.7°	1.1	
CC1,F 614.5 + CC1,F, 722.7	207.5	202.5	97.6°	1.2	

*Supplied by Army Chemical Corps. Specifications require at least 99.5% ethylene oxide content. *Calculated on basis of total sample.

Standard NaOH solution, 0.25 N, carbonate-free.

Standard HCl solution, 0.25

1

Bromcresol purple indicator, 0.04% solution; 0.1 gram in 18.5 ml. of 0.01 N NaOH diluted to 250 ml.

Procedure

Evacuate the sampler and weigh to the nearest milligram. Connect to the tee fitting of the sampling system. Puncture the container with the tapping valve, taking care that the liquid phase is tapped. Open the tapping valve slightly until the tap line is filled with liquid. Evacuate the tee-fitting assembly, close the valve to the pump, and open the tapping valve. Momentarily open the sampler valve. Close the tapping valve, disconnect the pump line, and discharge the tee-fitting contents in the hood. Reweigh the sampler. The sample should contain 0.15 to 0.22 g. of ethylene oxide. If the sample size is excessive, completely discharge the sampler in the hood, re-evacuate, and re-sample.

Evacuate the reaction flask. Fill the vertical pipette by suction with saturated MgBrg-H.SO, reagent slightly above the mark, and adjust the level to the mark with the needle valve. Wipe the lower end and the tip free of excess reagent. Insert the tip into the separatory funnel, fully open the needle valve, and allow the pipette to drain, for exactly one minute. touching the tip to the wall of the funnel for five seconds to complete the drainage. Connect the sampler to the needle valve on the flask. Open the needle valve and, while holding the sampler in a vertical

position for drainage, open the sampler valve. Open the stopcock of the funnel just long enough to admit the reagent into the flask. Close the sampler valve and, while keeping the needle valve open, disconnect the sampler. Close the needle valve when the flask has reached atmospheric pressure. Reweigh the sampler. Allow the closed flask to stand with occasional shaking. At about 15-minute intervals open the funnel stopcock and listen for the sound of inflowing air. Allow an additional 15 minutes for absorption after no further influx of air is evident. Wash the residual reagent from the funnel into the flask, and wash down the walls of the flask with carbon dioxide-free water using approximately 200 ml. Add several drops of indicator and titrate with standard NaOH, making the final adjustment of the end point by slow dropwise back titration with standard HCl. Carry duplicate 10-ml. control portions of the saturated MgBr.-H.SO, reagent through like operations, including the transfer to an evacuated flask. If the difference between the average milliliters of NaOH consumed in titrating a 10-ml. control portion and the milliliters of NaOH required to titrate the ethylene oxide reaction mixture is designated as △ ml. NaOH,

Ethylene oxide (milligrams) = ∆ml. NaOHxN.F.x44.05.

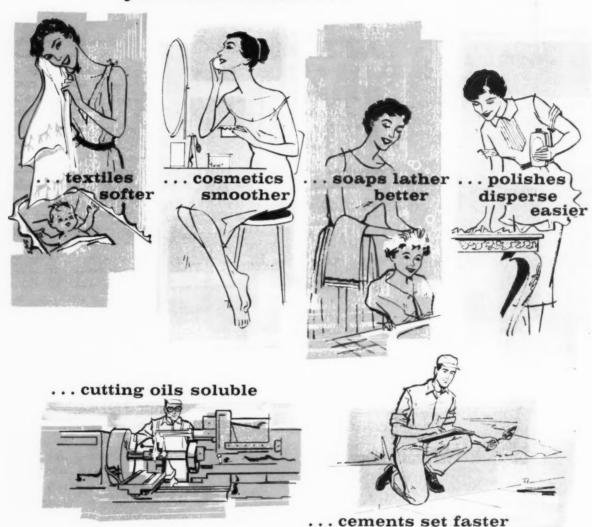
Results Obtained

To test the efficiency of the analytical method samples were collected by distillation of the gases in a closed system. Mixtures were prepared by distilling the components into the chilled sampler in the

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order of their increasing vapor pressure. As the distillation of each component involved only a few seconds, there was little chance that diffusion affected the composition. Control of the distillation rate was so difficult that the mixtures were not of exactly the composition sought. However, the ethylene oxide content $(13.4\text{-}14.4\,e_{\ell})$ was close enough to that of recommended sterilizing formulations $(11\text{-}12\,e_{\ell})$ to be representative. The results of the analysis of these samples are given in Table I.

The results for ethylene oxide alone show almost complete recovery. With ethylene oxide alone the residual gas in the sampler is, of course, not significant with respect to the percentage composition of the sample. However, with mixtures the residual gas will be different in ethylene oxide content from the total mixture. The amount of the difference depends on the composition of the mixture. Since the method is designated to reduce the residue to about one per cent of the total sample, for routine control purposes it should suffice to calculate the ethylene oxide content on the basis of the total sample. However, it is recommended that the percentage of residual gas be determined in order to detect excessive errors in this practice and to permit more exact computation when necessary.

The results of analysis of ethylene oxide-chlorofluorohydrocarbon formulations (Table II) show the effect of small amounts of the residual gas in the sampler. These samples were drawn from

12-ounce medium-pressure aerosol cans that had been packed by the cold-filling method from bulk formulations prepared in D-2 breathing oxygen type cylinders (approximately eight liters). This procedure always involved some increase in the ethylene oxide content during filling, partly because of its greater concentration in the liquid phase of the formulation in the cylinder and partly because of the dichlorodifluoromethane lost by evaporation in the filling process. The samples had been stored under various conditions, and the results indicate the stability of the formulation.**

References

- (1) Haenni, E. O., Affens, W. A., Lento, H. G., Yeomans, A. H., and Fulton, R. A., Ind. & Eng. Chem., 53.
- (2) Lubatti, O. E., J. Soc. Chem. Ind 51: 361T-367T (1932).

Pesticide Output Rises

Production of pesticides was up five per cent in 1958 over the 1957 figure, according to the preliminary report of the U. S. Tariff Commission on U. S. production and sales of pesticides and other organic agricultural chemicals. The report covers fungicides, herbicides, insecticides, rodenticides, soil conditioners, and soil fumigants.

Production of pesticides and other organic agricultural chemicals in 1958 totalled 539 million pounds compared with 512 million pounds in 1957. Sales in 1958 amounted to 467 million pounds valued at \$196,000,000, compared with 433 million pounds and \$178,000,000 in 1957.

Major share of these totals was accounted for by the cyclic group. Leader in this group was DDT, production of which was at a record high. About 445 million pounds of cyclic pesticides and related compounds were produced in 1958, a nine per cent rise over the 1957 figure of 47 million pounds. Sales in 1958 were 378 million pounds, valued at \$148,000,000 compared with 340 million pounds and \$132,000,000 in 1957. The output of DDT in 1958 amounted to the all time high of 145 million pounds.

Production of acyclic pesticides and other acyclic organic agricultural chemicals dropped in 1958 to 95 million pounds, from 101 million pounds produced in 1957. Sales in the acyclic group fell off to 89 million pounds, valued at \$48,000,000 from 94 million pounds and \$46,000,000 in 1957.

Copies of the preliminary report on production and sales of pesticides and other organic agricultural chemicals may be obtained by writing to the U. S. Tariff Commission, Washington 25, D.C. The commission's final report will become available later this year.

Agrico Transfers Gravitte

R. T. Gravitte has been transferred to the London, Ky., office of American Agricultural Chemical Co., New York, as assistant sales manager, it was announced last month by W. J. Turbeville, Jr., vice-president of fertilizer sales. Previously Mr. Gravitte was assistant sales manager at the company's Cincinnati office.

Table II. Analysis for Ethylene Oxide in Formulation with Chlorofluorohydrocarbons

Bulk Formulation % by Weight		Storage Conditions		Weight	Ethylene Oxide		
Ethylene Oxide	Chlorofluoro- hydrocarbons (1-1)	Time	Temperatures	of Sample	Weight	In Total Sample	In Sample Minus Residual Gas*
		Months	F	Grams	Grams	9/0	%
12.02	87.98	9	Ambient*				
		+ 8	130	1.3289	0.1596	12.01	12.14
11.97	88.02	9	130	1.3431	0.1617	12.04	12.18
		8	-32	1.4655	.1789	12.21	12.34
		.8	Outdoor	1 8606	2251	12.10	12.23

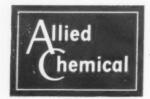
^{*}In each case 1.1 per cent of residual gas was left in the sampler.

^{*}Stored for 8 mos. at ambient temperature, then for 9 mos. at 130°F.





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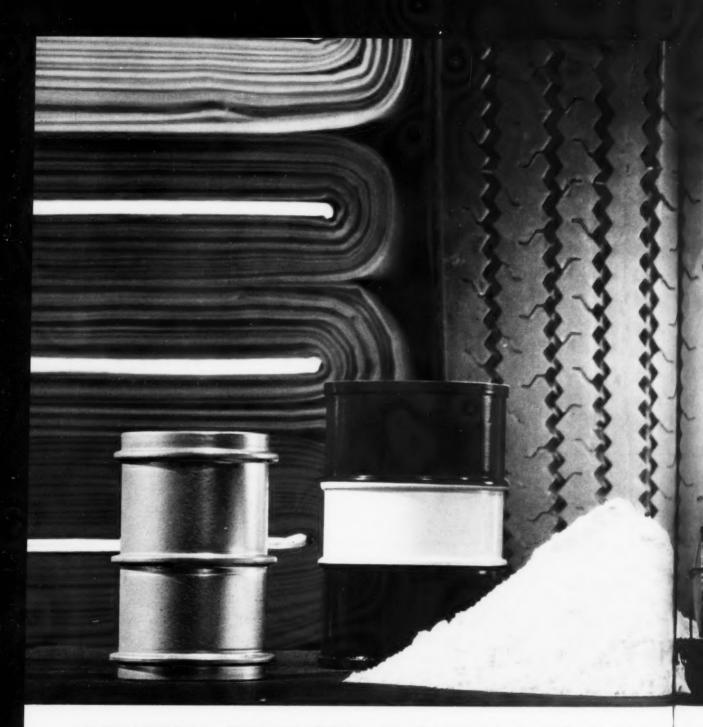
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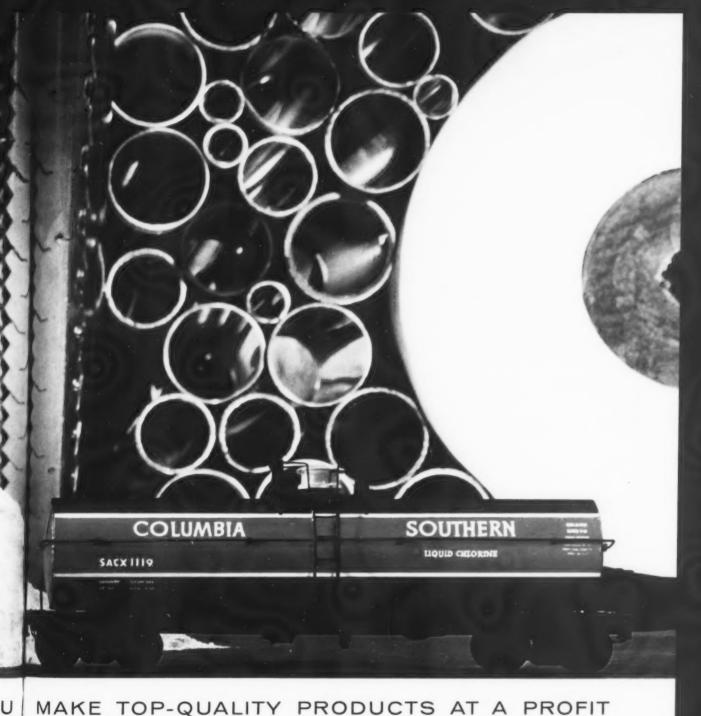
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Labeling Law Hearing...

No vote on federal hazardous substances labeling law (S. 1283) at this session of Congress as FDA at hearing opposes exemption for foods, drugs, cosmetics.

ONG-HOPED-FOR early passage by Congress of a hazardous substances labeling law acceptable to nearly all of the industry groups involved failed to materialize as a result of questions raised by the Food and Drug Administration. The position of FDA was brought into the open during a one day hearing in Washington, D.C., Aug. 13, on Senate Bill 1283, introduced by Sen. Warren Magnuson, a Democrat of Washington. The hearing, conducted by the Senate Interstate and Foreign Commerce Committee, of which Sen. Magnuson is chairman, was presided over by temporary chairman, Sen. Vance Hartke, Democrat of Indiana.

Testifying for the Food and Drug Administration was its commissioner, George P. Larrick, who expressed concern over thes fact that by exempting foods, drugs and cosmetics, the bill fails to cover certain areas in which appropriate precautionary labeling is indicated. Accordingly, with respect to foods he recommended that precautionary statements be required on selfpressurized containers which present a hazard; with respect to drugs he recommended that the power of the F.D.A. to require labeling on drugs, be clarified by an appropriate amendment (since the Food and Drug Administration has already published a proposed regulation on drugs in self-pressurized containers); and with respect to cosmetics he recommended that authority be delegated to the F.D.A.

to require precautionary labeling against hazards in the handling and use of cosmetics, including hazards in packaging.

To accomplish this, F.D.A. wants either the exemption removed from the proposed law, or an amendment added to the Food, Drug and Cosmetic Act to provide for precautionary labeling where necessary. The latter could be done by one piece of legislation. Title I would then be the Senate Bill 1283, Tile II, an appropriate amendment to the Food, Drug. and Cosmetic Act. From a legislative standpoint, it would have been simple to handle the FDC changes in one bill. However, this was opposed by the Proprietary Association which insisted that the amendments to the Food, Drug and Cosmetic Act be made the subject of separate legislation in order to give the affected industries a full opportunity to consider the impact of these amendments on their labeling programs.

The stand of the Proprietary Assn., plus the opposition of a marketer of pressure packaged foods, and an AFL-CIO recommendation that "industrial" as well as household chemical products be covered, were enough to tab the proposed bill "controversial" and thus probably rule out its chance of being voted on during the present session of Congress. Because of the large number of legislative matters Congress has to consider in the short time remaining in this overtime session before ad-

journment, it is understood that only "non-controversial" bills will be taken up.

The Chemical Specialties Manufacturers Assn., which has a vital interest in precautionary labeling, and other chemical industry trade associations were anxious and hopeful that S. 1283 and the companion measure in the House of Representatives, HB 5260, would be voted on at this session. Both bills, with modifications which will be reported on in detail later in this review are acceptable to CSMA. Manufacturing Chemists Assn., Toilet Goods Assn., American Petroleum Institute and the Soap Association. Because nearly all states which do not now have hazardous substances labeling laws are or will soon be considering them, chemical industry trade associations are anxious for passage of a workable federal bill that can be used as a model for state and even municipal legislation. The motivation for uniformity in precautionary labeling is obvious: it's much less burdensome to comply with a single law than with 51 different ones. For this reason, CSMA, MCA, TGA, and API have worked for several years separately and jointly to develop a bill that is workable. acceptable to all interested groups and renders the protection being sought for consumers. Even the obstreperous American Medical Assn., which incidentally was not represented at the hearing, goes along with the bill providing it is broadened to cover industrial as

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well as household "hazardous substances." In this, interestingly enough, it has a strange ally, AFL-CIO.

Chief spokesman at the hearing for the chemical industry trade associations was Dr. Emil G. Klarmann, vice-president in charge of technical services of Lehn & Fink, Inc., New York. A former president of the Chemical Specialties Manufacturers Assn., Dr. Klarmann is currently chairman of CSMA's Precautionary Labeling Committee. Under his direction the committee, which had been studying precautionary labeling for the past 10 years, prepared a model state law to regulate the labeling of hazardous substances intended for household use. According to Dr. Klarmann, this model has served as the basis for legislation adopted in California, Connecticut. Colorado, Indiana, Illinois, Kansas, Ohio, Texas and Vermont. The bill, which appears in full in the November, 1957, issue of Soap and Chemical Specialties, has been "supported by other industry groups and has been discussed with Federal and State officials and representatives of the Committee on Toxicology of the American Medical Association," Dr. Klarmann said at the hearing. Aug. 13.

"Against this background," Dr. Klarmann said, his committee had reviewed S. 1283 "carefully and in detail" and he has been authorized by CSMA to urge a favorable report on the bill. "S. 1283 will. we believe." Dr. Klarmann said. "establish a sound basis for a uniform labeling program for hazardous substances" for household use. He continued, "It is important that precautionary labeling follow a uniform pattern so it will be meaningful to the consumer, will properly inform physicians called upon to treat cases of injury or illness. and permit manufacturers to adopt a single label which will be acceptable in 50 states and territories.'

Changes in S. 1283 suggested in Dr. Klarmann's statement, he said, "are designed to clarify some provisions of the bill and to facilitate the problem of enforcing its provisions after it is enacted." The changes came out of a series of discussions and conferences among representatives of CSMA, MCA, AASGP, API and the Food and Drug Administration of the Department of Health, Education and Welfare.

The first change suggested by Dr. Klarmann concerned the definition of the term "hazardous substance." As defined in S. 1283, "a hazardous substance" is a substance or mixture of substances which is either toxic, corrosive, an irritant, a strong sensitizer, flammable or one which generates pressure through heat, decomposition or other means. The bill further states that a product within this definition is subject to the bill if it may cause substantial personal injury or illness during or as a proximate result of any customary or reasonably foreseeable handling OF HISE

FDA raised the point as to whether this definition includes hazards resulting from ingestion of household products by children as well as from accidental or careless use of the product. Dr. Klarmann stated that "unquestionably the definition does include such hazards which are reasonably foreseeable." However, he stated, so there will be no question that these classes of hazards are included, it is suggested that the definition be

Dr. E. G. Klarmann



amended to state that the customary or reasonably foreseeable handling or use of a product includes reasonably foreseeable ingestion by children.

Dr. Klarmann also stated: "It is our understanding of this bill that it does not intend to extend manufacturers' liability beyond the common law responsibility of manufacturers and distributors to label their products adequately. The bill, of course, provides a means of enforcing this responsibility."

CSMA also went along with a suggestion of the Food and Drug Administration that the Secretary of HEW Department be delegated specific authority to issue regulations following notice and opportunity for hearing to list substances which the Secretary finds meet the definition of a hazardous substance in this bill.

"Our industry," Dr. Klarmann said, "is in agreement with this recommendation since it will add an area of certainty and clarity to the enforcement program."

A recommendation that the exemption now contained in Section 2 (o) (2) for economic poisons and food, drugs, and cosmetics be transferred to Section 2 (f), the definitions of hazardous substances, for purposes of clarity was made by Dr. Klarmann.

He further suggested the climination from the bill of complicated and time-consuming toxicity tests to establish whether the word "Danger" should be used on labels. Instead, the CSMA spokesman suggested that the signal word, "Danger," be used on products which are extremely flammable, corrosive, or highly toxic, as those terms are defined in the bill, and that the signal words, "Warning," or "Caution," be used on all other hazardous substances.

Another change in Senate Bill 1283 suggested by Dr. Klarmann dealt with the definition of "strong sensitizer." As presently defined in Section 2 (k), the Secretary of DHEW is required to make

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a finding with respect to frequency of occurrence and severity of sensitizing reactions before designating a substance to be a strong sensitizer. Instead the CSMA spokesman suggested amending the second sentence of the subsection to require that the Secretary consider the frequency of occurrence and the severity of reaction from sensitizing materials as a basis for finding that the substance has a sufficiently significant potential for causing hypersensitivity to be designated a strong sensitizer.

A suggestion by FDA that the Secretary be also authorized to establish variations or additional label requirements for any particular substance if he finds that label requirements are not adequate for the protection of the public health and safety was concurred in by CSMA.

Dr. Klarmann also stated that CSMA was in accord with FDA on additional amendments to the bill dealing with the administrative and enforcement provisions of the bill. These amendments, according to Dr. Klarmann, will in general provide for a penalty for use by any person for his own advantage of information acquired under the authority of S. 1283. Another amendment would provide for increased penalties for intentional violations. Still another would authorize the courts to issue injunctions in appropriate situations and modify the provisions of 8. 1283 to authorize factory inspection. Such inspection in the opinion of the CSMA spokesman "is a reasonable provision which may aid in the enforcement of this bill."

Finally, Dr. Klarmann recommended, with respect to the effective date of the Act, that the Secretary (HEW) be authorized to extend the period within which the penalties shall not be effective for not more than 18 months after enactment of this bill when the Secretary finds that conditions exist which necessitate the prescribing of such additional time. This request was based on experience with

other legislation of this type, such as the Miller Amendment to the Food, Drug and Cosmetic Act and the Food Additives Amendment that some period of time will be necessary to permit both the Department and industry to revise their programs to insure compliance.

MCA Backs CSMA Stand

Nicholas M. Walker, assistant to the president of Pennnsalt Chemicals Corp., Philadelphia, made a statement on behalf of the Manufacturing Chemists' Association. He is immediate past chairman of the Labels and Precautionary Information (LAPI) Committee of MCA. In his statement, Mr. Walker said his organization believes that the amendments suggested by Dr. Klarmann are "sound and should enable the Department of Health, Education, and Welfare effectively to enforce the Act."

Mr. Walker pointed out also that many states are now considering hazardous substances labeling, and that it is "essential to the orderly marketing of our products that it be uniform."

"The principles used in preparing precautionary labelings," Mr. Walker said, "should be the same, whether the product is industrial or household. Of course, there might be differences in wording of the label, because an industrial and a household chemical will be used in different places and in different ways.

Mr. Walker called to the attention of the committee the importance which MCA attaches to the suggested amendment to the section of the bill covering labeling requirements. The amendment to Section 2 (p) (1) (B) requires the following information on the label: "(B) the common or usual name or the chemical name (if there be no common or usual name) of the hazardous substance or of each component which contributes substantially to its hazard, unless the Secretary by regulation permits or re-

quires the use of a recognized generic name."

Regarding the latter part of this requirement which authorizes the Secretary of DHEW to permit or require the use of a recognized generic name, Mr. Walker said: We strongly believe that such an authorization is needed, since there will be many instances where the chemical name would be very long and detailed and meaningless to the average person and even to the average physician." Mr. Walker pointed out that it would be much more useful and informative to a physician to have a meaningful statement on the label such as "Contains Lead Compounds" or "Corrosive Acid" than a detailed chemical structure."

The amendment proposed by Dr. Klarmann requiring the signal word "Danger" on substances which are extremely flammable, corrosive or highly toxic was endorsed "heartily" by Mr. Walker's group. This endorsement, he said, is based on the fact that specific tests are not practical in this regard from an enforcement or a compliance standpoint.

Although he opposes specific toxicity tests requiring that animals be subjected to certain concentrations of chemicals and observed for a period of time, Mr. Walker said he "wished to emphasize" that animal tests to determine the highly toxic or "poison" category are most important and that they should be retained in the bill.

The specific exemption of foods, drugs and cosmetics from S. 1283 "should be continued" the Toilet Goods Association said in a statement filed with the Interstate and Foreign Commerce Committee. TGA supported passage of S. 1283, but asked that the exemption be retained because in TGA's opinion "the manufacture, labeling, advertising and selling of products sold to U. S. consumers should not be covered by more than one law. Placing them under several laws which may be conflicting would only lead to diffi-



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culties in enforcement, to confusion and to possible litigation," TGA stated.

The TGA statement said that "we concur in the opinion of Commissioner Larrick that it is both desirable and necessary that foods, drugs and cosmetics which may present certain substantial hazards in their customary use by the public may need certain warning statements in their labeling. and we desire to go on record as approving the suggestions of Commissioner Larrick and Senator Hartke that a suitable amendment to the Federal Food, Drug, and Cosmetic Act of 1938 be prepared to cover these instances and included in S. 1283 as Title II of that bill."

The amendment suggested by TGA, which would be added as a new paragraph at the end of Sec. 602 of the present Food, Drug, and Cosmetic Act, reads as follows:

"A cosmetic shall be deemed to be misbranded—

"(e) if because of its nature, composition or packaging it involves a substantial risk of causing substantial injury to health during or as a result of any reasonably foresceable handling, storage or use by any individual or as a result of reasonably foreseeable ingestion by children unless in either case it bears (in addition to any other prescribed labeling) (1) such cautionary labeling as is necessary, for the protection of such persons and (2) where appropriate and necessary, instruction for first aid treatment. Whenever the Secretary finds that any cosmetics or class of cosmetics is subject to the provisions of this paragraph and in his judgement a declaration to that effect will promote the objectives of this paragraph by avoiding or resolving uncertainty as to its application he may by regulations declare any such cosmetics or class of cosmetics to be, and it shall during the effectiveness of such regulations be deemed to be effective to such provisions. Nothing in this paragraph shall be construed to exempt any article otherwise subjected to the requirements of this paragraph from such requirements by reason of the absence of such a regulation."

The American Medical Association in a letter to Senator Magnuson, chairman of the Interstate and Foreign Commerce Committee, said that S. 1283 "should encompass labeling for all hazardous substances, not simply those in-

tended or suitable for household use." AMA's letter, over the signature of Dr. F. J. L. Blasingame, executive vice-president of AMA, called for a law that would "require informative labeling, which would include a list of hazardous ingredients, their potentialities for harm, directions for safe use, and first aid instructions."

Similar labeling, according to the AMA letter should be applied also to chemicals for export to foreign countries.

Dr. Blasingame stated that AMA approves the pending bill in principle, but he made several suggestions for strengthening it. One suggestion was that the bill should include appropriate warning symbols, such as the common skull and crossbones, to various types of hazards, especially those associated with dangerous products.

CSMA Roach Diet Change

A change has been officially approved in the diet for German cockroaches used in the CSMA Official Cockroach Spray Method and CSMA Tentative Aerosol Method, it was announced recently by the Chemical Specialties Manufacturers Association.

Seven cooperating and advisory laboratories of the CSMA Insecticide Scientific Committee started cooperative tests in August 1958 to evaluate various diets for the German cockroach. The German cockroach is the test insect specified for use in the CSMA Official Cockroach Spray Method and the CSMA Tentative Cockroach Aerosol Method. Based on these cooperative tests action was taken at the meeting of the Insecticide Scientific Committee on May 8, 1959 to specify Purina Laboratory Chow, Ralston Purina Co., St. Louis, Mo., as the standard CSMA diet for German cockroaches in the CSMA Official Cockroach Spray Method and the CSMA Tentative Cockroach Aerosol Method. The new diet replaces the previously specified Purina Dog Chow Checkers or equivalent specified in the

two methods as published in the 1959 SOAP and Chemical Specialties "Blue Book." Present plans call for slight revision of the two methods, including the change in diet and other minor changes, with the hope that the revised methods can be adopted at the next committee meeting in December 1959, following which the revised methods can be published in the 1960 "Blue Book."

The action of the Insecticide Scientific Committee was approved by the Executive Board of the Insecticide Division and the CSMA Board of Governors at their meetings in May, 1959.

Lighter Tall Oil F. A.

Lighter and more stable color characteristics are claimed for a new tall oil fatty acid just introduced by Arizona Chemical Co., 30 Rockefeller Plaza, New York 20, under the trade name "Acintol FA 1." Liquid soaps and synthetic detergents are among the products in which the new acid is expected to find use. Liquid soap products of better color characteristics are said to result from this new material, which also permits the formulation of liquids with higher soap solids content.

New Lukens Bulletin

A bulletin in file folder form was issued recently by Lukens Laboratories, Inc., and Skinner & Sherman Co., 227 California St., Newton, Mass., describing their testing and laboratory facilities. The firms specialize as consultants and analysts in the chemical specialties, soaps, and detergents fields.

Detergents in Water

(From Page 56)

acids and, more important, will resist biological decomposition and hence will survive, at least in part, sewage treatment, river self-purification processes, ground water travel and will appear in varying reduced amounts in drinking water.



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At the present time and under normal conditions of rainfall, the concentrations of surfactant in drinking water are low. probably in the parts per billion range. But under conditions of abnormally low rainfall or increased pollution of the raw water supply with sewage effluents, concentrations have been shown to reach a few parts per million. These concentrations are easily detected both by foaming and by offtastes and odors. The deteriorated quality of the drinking water and apprehension about any possible chronic effects of continued ingestion of small amounts of synthetic detergents have spurred research on the problem. Most of the effort at present is directed toward removing the surfactants at the sewage treatment plant. Some consideration has also been given by major producers of synthetic detergents to the development of other suitable compounds equal to the present surfactants in cleansing properties, but, unlike them, decomposable by biological life. A step in this direction has been the development of a synthetic detergent based. not on petroleum as most of them are, but on sugar (12). The compound is still largely in the development stage.

Continued active research will doubtless discover means for increasing the efficiency of sewage treatment processes in the removal of surfactants.*

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Analyzing Periumes

(From Page 59)

a standard of acceptable quality, was shown to contain a small amount of higher-boiling component which was very damaging to the odor. This was established by actually having the perfumer smell the effluent vapors. While we did not identify this component chemically, it was possible to advise the supplier to take a slightly narrower cut during the distillation. This was done and the quality problem was corrected. Here, then, are good examples of the perfumer and the instrument complementing each other in a quick, simple, and reliable manner.

While the gas chromato-

graph is very helpful in the investigation of such short-term quality problems, its most interesting area of application is in research, where a number of really basic problems can and are being investigated. For example, the question of the exact composition of the essential oils has for years been a great challenge to the perfume scientist. There are also some very practical reasons for investigating the composition of the essential oils. That is, while the compositions of natural products are subject to certain natural variations beyond our control, the purity of synthetic substitutes can be much more accurately controlled and certainly these materials can be maintained in adequate supply.

General Application

The general application of gas chromatography in the research area can be illustrated by some experiments which we have undertaken with Citronella Formosan. The principal components of this oil are well known-namely citronellal, citronellol, and geraniol. As you know, when these three synthetic chemicals are combined in the indicated proportions. the odor of the mixture is only slightly reminiscent of Citronella Formosan. This, of course, means that the minor components, comprising all together about five per cent of the natural oil, are of great importance to the odor. The isolation and identification of about 20 of these have been reported (2). When we investigated the composition of this oil by gas chromatography, no less than 35 minor constituents were found. identification of each of these substances by classical chemical and instrumental methods would be a gigantic task. We, therefore, reasoned that perhaps certain of these minor ingredients were much more important odorwise than the others. By smelling the effluent vapors from the gas chromatography column, our perfumers were able to point out, and in some cases

help identify, the more important substances which contribute to the odor. We are presently in the process of identifying these more important minor constituents.

Summary

In summary, from the perfume material consumers' point of view, gas chromatography has proven a very valuable tool for the investigation of the problems of odor quality and for the investigation of the composition of very complex natural mixtures such as the essential oils. We are hopeful that the tremendous advances in column efficiency and detector sensitivity will make it possible to specify and control the concentration of the constituents of significance to odor-if not for all materials, at least for some of them. Finally, we are gratified that the technique is, by its nature, sufficiently precise and simple to make very practical its use for routine analysis of perfume raw materials in a plant laboratory.★★

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Leveling Agents

(From Page 99)

gives a floor wax of good spreadability, and water and spot resistance.

"Vinac ASB-10" (l), an alkali soluble vinyl copolymer gives a water clear film of good leveling characteristics if it is correctly adjusted with a wax dispersion. However, ammonia or resin concentration exceeding 15 per cent will gradually increase viscosity.

Natural Resins

Refined shellac is regaining its importance in the floor wax industry, because it exhibits certain valuable characteristics which are not easily matched by synthetic resins. Used in proportions as low as 10 to 20 per cent shellac improves leveling, gloss, hardness and removability.

Thorough investigations of the incorporation of shellac into floor waxes containing polymer resins were conducted at Battelle Memorial Institute (1). These confirmed the author's findings: that an increase in shellac content produces a wax of better leveling characteristics and improved film continuity, and that it hardens soft acrylic resins.

The floor wax formulator is well aware of these advantages offered by the use of refined shellac. But he is faced by new problems engendered by the trend toward light floors and water clear polymers for floor care products (2). Shellac dispersions tend to be darkened by ammonia, and even more by AMP. This tendency becomes more apparent as the percentage of shellac increases. Nevertheless, the author believes that floor wax dispersions suitable for light floors can be obtained with bleached shellac, provided the percentage is limited to 10 to 15 per cent. This percentage is favorable also to the water resistance properties of the film, which will be harder and exhibit better leveling characteristics than corresponding formulations without shellac.

There is a very light and hard shellac on the market, the color of which has been reduced without bleaching. "Clearfoil" shellac "Supra" (b) is solvent extracted shellac, decolorized by treatment with activated carbon. This shellac is very hard and provides good leveling and ready removability. While chlorine bleached shellac may become insoluble after several months. "Clearfoil" does not polymerize for years.

Regardless of whether the formulator prefers chlorine bleached or carbon decolorized shellac, he is able to obtain satisfactory leveling properties by correct formula-

b) Paul & Stein Brothers, Inc.

tion of shellac with synthetic re-

Summary

Only some of the many well known surface active agents and resins commonly used as improvers of leveling properties in floor waxes could be discussed. Their number will tloubtless grow further through new technological developments.

Skillful blending of natural substances with synthetic materials to get the best results is not new and not peculiar to the floor wax industry. Textile manufacturers use the same technique, blending natural and synthetic fibers for improved appearance and performance of fabrics.

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Fly Control

(From Page 86)

mals almost continuously, leaving only briefly to lay eggs on fresh droppings. Their restricted breeding habit suggests that they might be controlled by collecting and disposing of droppings. This is a daily requirement in feeding and milking barns and barnyards where high standards of sanitation must be maintained and it doubtless minimizes horn fly production, although some use of insecticides is usually necessary. On the other hand, insecticides are the only means of controlling horn flies on animals on pasture and range lands

On dairy animals only insecticides that will not contaminate milk may be used. At the present time synergized pyrethrum and allethrin are recommended as safe and are used in most sections of the country. From one to two quarts per animal of an emulsion or suspension containing 0.025-0.1 per cent of pyrethrins or allethrin plus 0.25-1.0 per cent of a syner-



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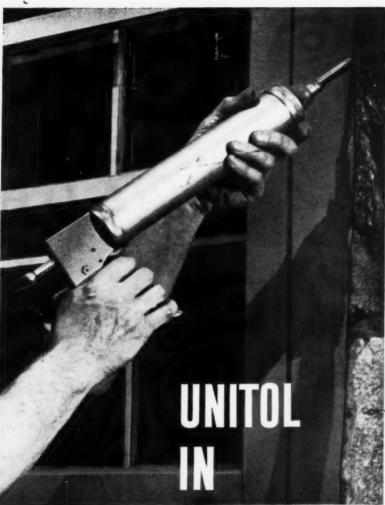
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gist will control horn flies for three to seven days. Synergized pyrethrum or three to five per cent of an organic thiocyanate in oil solution may be applied as a mist spray at the rate of one to two ounces per animal. Daily applications by hand or automatic spraying devices are usually necessary. A 50-per cent methoxychlor wettable powder dusted by hand over the backs of cattle at the rate of one tablespoon per animal will give good control for several weeks. None of these treatments are entirely satisfactory to dairymen, but there are no alternatives at present. However, there is a possibility that "Sevin" can be used, since preliminary studies indicate that it is not secreted in detectable amounts in the milk.

A number of insecticides are approved for controlling horn flies on beef cattle. Methoxychlor, toxaphene, and TDE are perhaps the most popular. Malathion and "Co-Ral" have come into fairly wide use in the last two years. "Ronnel" recently received label approval for use this year. Sprays containing 0.5 per cent of any of these materials are usually effective for three to four weeks. "Sevin" may also be used, but it is less durable than other approved insecticides.

In many instances simple back-rubbing devices are used to control horn flies. If properly installed and re-treated every three to five weeks, these devices will maintain control at little expense or effort on the part of the cattleman. Electric eye or treadle-type sprayers are effective if they are located so that cattle must pass through them to reach water or feed. Any of the insecticides mentioned above may be used on selftreatment devices. Oil solutions containing synergized pyrethrum or methoxychlor are the most satisfactory for use in treadle sprayers.

Reports from many sections of the country indicate that the chlorinated hydrocarbon insecticides are not controlling horn flies for as long as they did a few years ago. Resistance has been suspected but has not been confirmed. Should this class of insecticides fail, malathion, "Co-Ral," and "Ronnel" can be relied upon to give good control.

Stable Flies

The synergized allethrin and pyrethrum sprays described for the control of horn flies are the most effective deterrents to stable fly attacks. Various proprietary formulations, such as "Crag Fly Repellent" (butoxy polypropylene glycol), "Tabatrex" (dibutyl succinate), and "MGK Repellent 11" (2,3,4,5,-bis (△2-butylene) tetrahydrofurfural) are reported to give good protection under certain conditions. In our tests none of these materials was highly effective for more than a few hours but they did provide some protection for a day or two.

During the last two years our Kerrville, Texas, laboratory has intensified screening of insecticides and repellents as animal protectants. Several thousand materials and combinations have been tested without finding one markedly superior to pyrethrum. However, we are confident this research will pay off some time. Certainly the need in this field justifies continued research.

Horse and Deer Flies

Horse flies and deer flies breed in a wide variety of aquatic and semi-aquatic environments. Information on their biology is available for only a few of the important species. However, the information we have indicates that control of breeding would be impractical, if not impossible. Therefore, the only approach to the problem is to protect livestock by means of insecticide and repellent treatments.

Synergized pyrethrum sprays will provide some protection against horse flies and deer flies. "Crag Fly Repellent," "Tabatrex," and "MGK Repellent 11" have been reported to be fairly effective in some locations, but none of



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Product Application—A Snell client in the paper industry, for whom we had developed a fine additive, wanted to explore uses in other fields. Unfortunately, their highly qualified staff's experience was limited to the one field. Snell, with experts in practically every product field, found the new product has potentialities as both a good emulsifier and a paint plasticizer. Only the very largest manufacturing companies can duplicate the breadth of experience and background the Snell "brain-trust" of technical experts can offer you!

Product Improvement — One Snell client found their product, an adhesive bandage, slipping in quality. Tape was going gooey in storage on druggists' shelves. Snell research helped this client bring his product quality up to equal the best on the market, and retain his share of sales.

Product Evaluation—A Snell brewery client wanted to expand production and take advantage of a more efficient production technique but feared the taste of the beer might suffer. Snell food technologists, taste panels, and engineers checked the new process and hundreds of samples of beer made under new and old systems, recommended the switch to the more profitable modern process. The change went unnoticed by the customers, and sales continued to climb.

Market Research—A Snell client with a waste product had briefly considered building a plant to use it to manufacture another product; but had given up after their own brief survey showed the new product to be already overproduced. When they consulted Snell for checking, however, Snell predicted there would be a shortage within three years. The client waited two years, built the plant—and now has a profitable new product instead of a waste!

Toxicology—One of the largest frozen food companies began getting complaints on the flavor of one of their green vegetables. Since hundreds of thousands of dollars were at stake, they consulted Snell to find out what was wrong. Snell by analyzing tests, and checking on the farm, was able to prove that the taste—actually toxic—was due to a new type of insecticide sprayed on the fields hundreds of yards away on a windy day long before the harvest!

Engineering—A large midwestern firm desired to produce its own brand of instant coffee, to possess outstanding flavor, body, and bouquet. They engaged Snell to design their extraction line, which is now economically producing a superior product, and have since doubled capacity. Since that time, two additional plants have been modified under our supervision to increase production and improve product characteristics.

What's Your Product Problem?—Whatever it is, and whatever your product field—chemicals, chemical specialties, personal products, pulp and paper, protective coatings, plasties, textiles, foods, petroleum, rubber—Snell has men who "know the score" in that field, and who can work with you creatively and profitably in developing, producing, protecting and marketing new ideas. This broad experience can be decisive in protecting not only your ideas, but also the thousands of dollars you spend developing them. And the cost of Snell service is less than you might imagine! Half the jobs we do cost less than \$1000!

SEND FOR FREE BOOKLET

On Research Development & Testing "SERVICES FOR YOU." It tells you how Snell can serve YOU! No obligation, of course. Foster D. Snell, Inc., Dept. s-9, 29 West 15th Street, N. Y. 11, N. Y.





SNELL

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SPECIAL WAXES **OZOKERITES** CERESINS PALM WAXES CASTING WAXES RESIN BLENDS

Compounding to your **specifications**

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these materials have given; satisfactory results in tests at our field stations. Without question the greatest need of the livestock industry today is for a long-lasting animal protectant.

Flies Causing Myiasis

Myiasis due to screw-worm causes an estimated \$40 million annual loss to the livestock industry in deaths, injury, and loss of weight of cattle and other farm animals. Most of this loss occurs in the Southern part of the United States. The screw-worm rarely spreads beyond a line from northern Texas to northern Georgia, and so it is not a problem in the major livestock areas of the Western, Midwestern, and Northern states.

Everyone is doubtless familiar with the current program for eradicating the screw-worm in the Southeastern states through the release of sterilized male flies. This method capitalizes on the fact that female flies mating with sterilized males do not lay viable eggs. Thus, the release of sterilized males in an infested area gradually reduces and finally eliminates the natural population. This method was used to eradicate the screwworm on the island of Curacao in 1954. It apparently has been successful in the Southeast, as no natural infestations have been found since February 19.

The spectacular success of the sterile-male method of control has diverted attention from two outstanding new insecticides for screw-worm control. This is unfortunate because insecticides are still the only feasible means of control in the Southwestern states. which have far more livestock than the Southeastern states. The new insecticides are "Co-Ral" (Bayer 21/199) and Ronnel (Dow ET-57). Dermal sprays containing 0.5 per cent of "Co-Ral" and wound treatments with a 5-per cent "Ronnel" smear will eliminate existing screw-worms and usually prevent reinfestation until the wound heals. These treatments

are vast improvements over the older remedies "EO-335" smear 62.

Fleeceworms are serious pests wherever sheep are grown. "Co-Ral" and Ronnel are highly effective against these species. Both are also recommended for general livestock insect control. These materials are therefore important weapons for the entire livestock industry.**

Reference

() Public Health Pesticides, Report for 1959 Pest Control 27 (3):9-27,

Trade names of pesticides mentioned in this article and their makers include:

"Co-Ral." Chemagro Corp., New

"Crag Fly Repellent," Union Carbide Chemicals Co., New York
"Diazinon," Geigy Agricultural

Chemicals, Ardsley, N. Y.

"Dipterex," Chemagro Corp., New

"EQ-335," Dow Chemical Co., Midland, Mich.

"MGK Repellent 11," McLaughlin Gormley King Co., Minneapolis

'Ronnel." Dow Chemical Co..

Midland, Mich.
"Sevin," Union Carbide Chemicals Co., New York

Bleaches, Brighteners

(From Page 81)

ferent detergent has been used and the stability of the brighteners to the bleach are of a slightly different order. Figure 5 combines the swatches shown in 3 and 4 for easy side-by-side visual comparison.

Summary

The value of both bleaches and brighteners in laundering is probably greater than is generally realized. Since not all brighteners are stable to chlorine bleaches a compatibility problem exists. This may be approached in two ways. Laundering procedure may be modified and the bleach added only after a few minutes of the washing cycle have elapsed. This may be considered a nuisance by the home maker. Automatic dispensing washing machines might take care of the timing. But human or automatic timing does no more

than minimize the compatibility problem. The only effective solution is supplied by the use of chlorine stable brighteners which may be incorporated into either the bleach or the detergent. There is a need for chlorine stable brighteners effective on a wider range of fabrics than are those currently available.

Automotive Specialties

(From Page 93)

very carefully the newest automobile developments which may affect the sales of automotive products that maintain or protect cars. Of course, we know that no one's crystal ball can really look as far as ten years ahead—but from what we know of today's cars and of the models still on the drawing boards, this is our best guess at some of the developments ahead in the automotive field.**

DCAT Chairmen Named

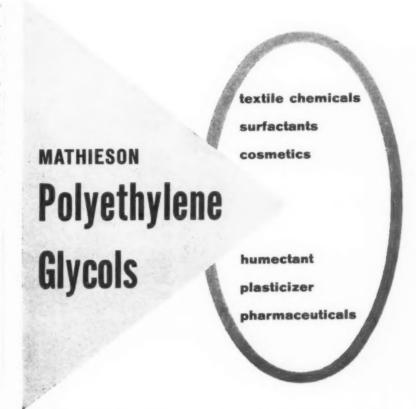
The appointment of committee chairmen for the 69th annual meeting of the Drug, Chemical and Allied Trades section of the New York Board of Trade was announced last month by Ralph A. Clark, president of the section. The meeting is scheduled for Sept. 17-20 at the Sagamore Hotel, Bolton Landing, N. Y. General chairman for the gathering is F. M. Schwemmer, White Laboratories, Kenilworth, N. J.

Other chairmen and the committees they head are: Paul J. Cardinal, Hoffman-La Roche, Inc., Nutley, N. J., business program; Leon W. Miller, Plastics & Coal Chemicals Division, Allied Chemical Corp., New York, registration; Paul E. Weber, Chas. Pfizer & Co., Brooklyn, N. Y., golf; W. F. Schumacher, J. T. Baker Chemical Co., Phillipsburg, N. J., hospitality; Griffin Crafts, J. W. Wilson Glass Co., Brooklyn, N. Y., fellowship; J. E. Zacharias, McKesson & Robbins, Inc., New York, memorials; Norman C. Babcock, Union Carbide Chemicals Co., New York.

Thursday night reception; John Rockwell, Doherty, Clifford, Steers & Shenfield, Inc., New York, Friday night entertainment; W. J. Schieffelin, III, Schieffelin & Co., New York, Saturday night reception; Hugh S. Crosson, McKesson & Robbins, Inc., New York, ladies card party; and E. D. Bowes, Kimble Glass Co., Vineland, N. J., miscellaneous sports.

Tops Intex Distributor

Intex Chemical Corp., Lodi, N.J., announced late last month the appointment of Tops Chemical Co., Duarte, Calif., as a distributor. Tops will handle sales of the Intex line of quaternaries and other surface active agents in the ten southern counties of California, according to William B. Mason, director of sales for Intex.



Poly-G 200, 300, 400, 600, 1000, 1500, B1530

You will find a wide range of properties in the Poly-G series of polyglycols. One of them may exactly suit your requirements. Varying from clear liquids to wax-like solids, the products are water soluble and nonvolatile. Ask your Olin Mathieson representative for complete information.

NEW—Technical data sheets covering the Poly-G glycols are available. Write for a set today.



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your product belongs

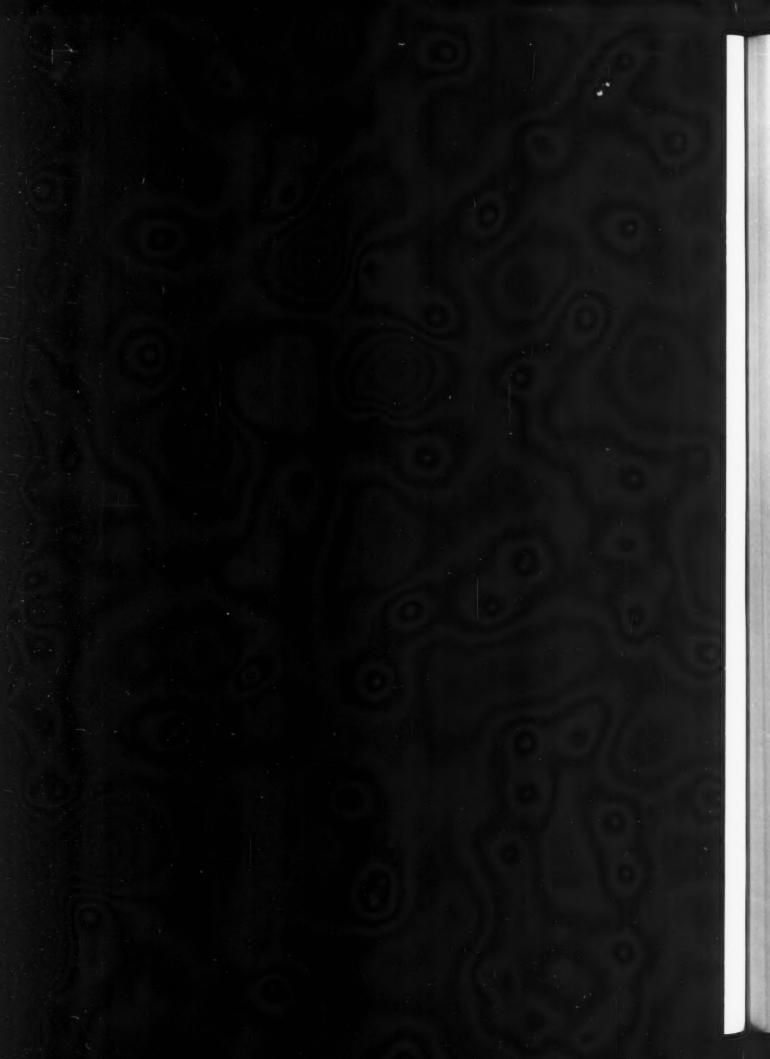


in glass by Brockway

What makes a product belong? Acceptance by the consumer public . . . acceptance for the product itself . . . and acceptance for the container in which it is presented for sale. • A good product is greatly enhanced at the point of sale when presented in an attractive glass container . . . a glass container by Brockway. • Brockway provides individuality in a glass container . . . the kind of individuality that makes your product stand apart from all the rest, thereby providing a strong advantage at the point of sale. • A product that is worthy of consumer acceptance deserves a quality glass container by Brockway.







Packaging...

AEROSOLS · LIQUIDS · PASTES · POWDERS

"Sno-San." liquid porcelain cleaner. (Hysan Products Co., Chicage) is now being packaged in new rigid polyethylene bottle recently introduced by Owens-Illinois Glass Co., Toledo. Bottle. made of white polyethylene, has silk-acreen label in reyal blue. New Owens-Illinois screw top clearer is of black plastic. Unbreakable bottle is molded to fit the hand.

Automotive Chemicals Cleaners Detergents Deodorants Disinfectants Floor Products Insecticides Laundry Bleach Metal Cleaners Moth Products Polishes Shampoos Shave Products Soaps Liquid Starch Toiletries and other Chemical Specialties

A market for over 28 billion packages annually





pretty, practical, profitable

Leading cosmetics attract more attention and sales when they are capped with Crown Meritseal. On your production line, Meritseal caps spin on smoothly and swiftly. On retail shelves, their sparkling lithography commands attention. At home, their easy removal and efficient re-sealing add to your product's popularity. May we have the opportunity to discuss or provide you with more details?

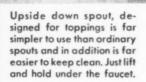




The answers to aerosol valve needs are being developed and perfected daily at Precision . . .

THIS MEANS ADDITIONAL PRODUCT SALES FOR YOU!







A Precision stream spout for dispensing any product, regardless of viscousity, that will pour. Currently most toothpaste and syrup manufacturers, are using this practical and attractive unit.



This graceful spout has proven to be a profitable way of dispensing pharmaceuticals and cosmetics. Combined with Precisions metering valve, it dispenses a pre-determined amount with a touch.

At Precision there is a continuing program of research and development, for each day brings new products to be packaged in aerosol containers. The success of aerosols, is based on functional design and attractive appearance for these two go hand in hand to improve dispensing and increase sales.

Perhaps your product, whether it be dispensed as a foam, a spray, a drop or a stream, should be adapted to an aerosol package. Aerosols have proven, an increase in sales because of appearance, economy and simplicity of use. Precision engineers will be most happy to talk with you.

SPRAY POAM

PRECISION VALVE CORPORATION, 700 NEPPERHAN AVENUE, YONKERS, N. Y.



NOW-

THE FIRST GLASS ENCLOSED SANITARY
HIGH SPEED LINE FOR PRESSURIZED
FOOD PRODUCTS . . .

Three other high-speed
lines are available
for loading metal or
glass aerosol containers
that do not require
completely sanitary
conditions.

Stalfort, the country's largest filler, can also load liquids, waxes, or creams in conventional glass or metal containers. An all-stainless-steel line for loading pressurized food products in aerosol containers under sanitary conditions is now in operation at Stalfort's modern Pressure-Pak plant. Completely segregated in a glass-enclosed area, this line is dismantled and sterilized before and after each production day. Any food product suitable for aerosol dispensing, even powder, can be economically handled in this area.



JOHN C.

STALFORT & SONS, INC.

Established in 1868 321 W. Pratt Street, Baltimore 1, Md.

PACKAGING NOTES

Wirz Names Sales Rep.

The appointment of G. Edmund Heine as New York 'sales representative for A. H. Wirz, Inc.,



G. Edmund Heine

Chester, Pa., was announced recently by Robert F. Cox, president. Wirz are manufacturers of aluminum aerosol containers, collapsible metal tubes, and plastic containers. As sales representative, Mr. Heine is associated with Virgil L. Dickey. who has represented the company in the New York area since 1957. Before joining Wirz, Mr. Heine was associated with several companies in the packaging field including Flyndustries, Inc., New York, packaging engineers, as executive vice-president, and Niagara Box Co., New York, as a sales specialist in the cosmetic and pharmaceutical fields. The new Wirz regional office in New York is now at 475 Fifth Ave.

Plax to Expand Facilities

Increased demand for its plastic bottles, particularly by the household chemical specialties industry, has been cited by Plax Corp., Hartford, Conn., for two recently announced plant expansions. Ground has been broken for a 40,000 square foot expansion at the company's Deep River, Conn.,

plant, and plans have been put into effect to increase the work force of the Ligonier, Ind., plant by 100 per cent in the next six months, according to Robert F. Elder, president.

The Deep River addition is scheduled for completion by Jan. 1, 1960. It is of one-story steel frame and concrete block construction which will conform to the 88,000 square foot existing structure.

Continental Earnings Rise

Net income in the first half of this year for Continental Can Co. New York, amounted to \$19,267,000, or \$1.54 per common share compared with \$16,958,000, or \$1.44 per share, in the first six months of 1958. Net sales and operating revenues rose to \$535,354,000 from \$498,702,000 in the 1958 first half.

Brockway Names Borland

William S. Borland has been appointed to the field sales staff of Brockway Glass Co., Brockway, Pa., it was announced last month by A. G. Beltz, general sales manager. Mr. Borland calls on customers for the company's line of glass containers for the proprietary and pharmaceutical specialties and for

William S. Borland



beverages in the Buffalo, N. Y., region. He works out of the company's headquarters at 47 West Huron St., Buffalo. With Brockway since 1949, Mr. Borland has held positions in the traffic, personnel, and sales departments.

Thatcher Appoints Selden

George D. Selden was appointed New York district sales



George Selden

manager last month for the plastic container division of Thatcher Glass Manufacturing Co., New York. The division's plant is in Nashua, N. H., and produces a line of plastic tubes and bottles in both polyvinyl and polyethylene.

Previously Mr. Selden was director of market and product research for the extruded plastics division of Vick Chemical Co. in Norwalk, Conn. Prior to that he was with Scovill Manufacturing Co., Waterbury, Conn.

New Can Depalletizers

Two new empty can depalletizing machines which operate at normal line speeds and handle all types of round cans have been designed by the equpiment development department, metal research and development laboratory, Continental Can Co., New York. The machines are available through the company's metal division sales department. Developed to reduce the packer's empty can handling costs, the machines have been designed in a manual model, 464-ECD-2, and a standard model, 465-ECD-1.



propellants
put action
in products



Why don't you discover Ucon Propellant service, too?

UNION CARBIDE CHEMICALS COMPANY

Division of Union Carbide Corporation • 30 East 42nd Street, New York 17, N.Y.

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The manual depalletizer handles cans at speeds of up to 700 per minute and utilizes an operator who manually sweeps the layers of cans into a waterfall type blender. Features of this model include a pallet stop, the ability to change the direction of pallet infeed and can discharge, and flared pallet infeed entrance for proper alignment of the can load.

Can handling speeds of up to 900 per minute are possible with the standard machine which is more mechanized than the manual. It has a powered sweep arm and a can transfer or temporary storage belt.

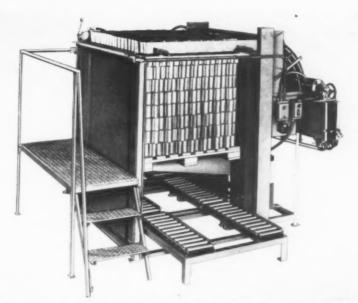
Both machines are reported to be so designed that new semiautomatic features may be added when they become available.

Vulcan Assigns Lynch

David W. Lynch has been named sales manager of national accounts for Vulcan Steel Container Co., Birmingham, Ala., it was announced last month by Gordon D. Zuck, president. Mr. Lynch recently joined the sales staff at Vulcan (see Soap and Chemical Specialties, May 1959, p. 173). In his new position, he contacts all multiple-plant companies using steel pails and drums. He was widely known in the insecticide and chemical specialties field when he was associated with John Powell & Co., New York, and later with Velsicol Chemical Corp., Chicago. Before joining Vulcan he was on the Pa-

David W. Lynch





Manual can depalletizer model 464-ECD-2 by Continental Can Co. handles up to 700 cans per minute, features pallet stop, can change direction of infeed and discharge.

cific coast in a different line of sales work.

Fome-Cor Plant Opens

Full scale production of "Fome-Cor" board began last month at the Addyston, O., plant of Fome-Cor Corp., Springfield, Mass. "Fome-Cor" is a light-weight toamed plastic and paper sandwich material which is used in specialty containers, displays, and similar applications. It is said to have good cushioning and insulation properties as well as high compression strength when wet.

New Polyethylene Plant

E. I. du Pont de Nemours Co., Wilmington, Del., announced last month it will produce polyethylene film for packaging at its Spruance cellophane plant in Richmond, Va. Installation of equipment started in July, in buildings formerly used for rayon production. Polyethylene film production is scheduled to begin early in 1960. The new plant will be operated as a unit of the Spruance facilities and a 12,000 square foot addition will be constructed for production equipment. Du Pont has a polyethylene film pilot plant at the Sabine River Works,

Orange, Tex., and also produces polyethylene film in commercial quantities at its Yerkes plant in Buffalo, N.Y.

Canco Appoints Three

Three appointments in western manufacturing plants of American Can Co., New York, were announced last month by L. E. Davis, western area manager of manufacture. J. L. Pike has been named assistant manager of the Los Angeles plant. Previously he was plant superintendent in Salem, Ore., and has been succeeded in that position by Kenneth Nelson, who was formerly plant manager of the Oakland, Calif., plant. Replacing Mr. Nelson is Richard Brown, who was previously quality control supervisor for the Pacific states region.

Inland Names Mehler

Ralph G. Mehler was recently elected vice-president of operations for Inland Steel Container Co., pail and drum manufacturing division of Inland Steel Co., Chicago. He succeeds Edward E. Grosscup who resigned. Mr. Mehler has been with Inland since 1930 and most recently served as superintendent at the company's Indiana Harbor, Ind., works.

OUR FLEXIBILITY PUTS US IN A BETTER POSITION

To Turn "INSIDE OUT"
When It's Necessary
to Take Care of Users

ALL STYLES-ALL SIZES-ONE THRU FIFTEEN GALLONS

ALL TYPES OF PROTECTIVE INTERIOR LININGS

ALL TYPES OF PROTECTIVE INTERIOR LININGS

POURING EQUIPMENT

POURING EQUIPMENT

OF THRU FIFTEEN GALLONS

OF

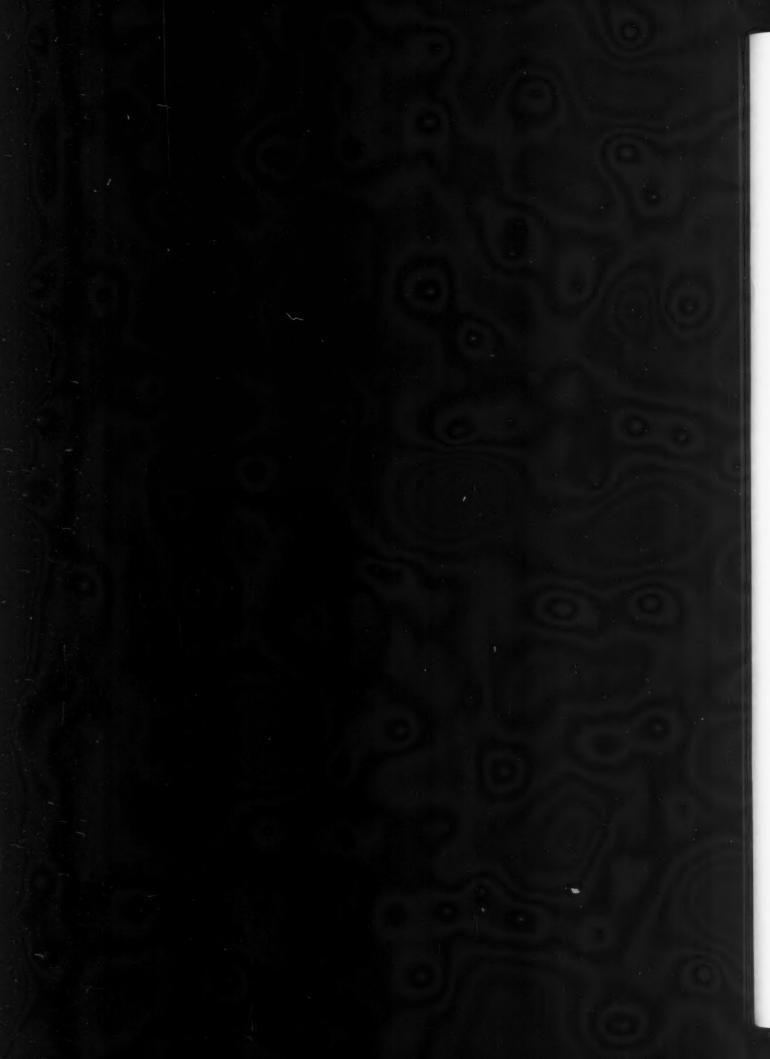
TRY-

CENTRAL

Can Company

2415 W. 19th ST. CHICAGO 8, ILLINOIS





O-I Appoints Cook

George W. Cook has been named a vice-president of the administrative division of Owens-



George W. Cook

Illinois Glass Co., Toledo, O., it was announced last month by Carl R. Megowan, president. Recently Mr. Cook was appointed to the newly created post of director of purchases and traffic. He joined O-I in 1925 and was named director of purchases in 1953.

Continental Can Changes

Several appointments in its metal divisions were announced last month at Continental Can Co., New York. The appointment of Lee Mason as general line sales manager of non-food cans and steel containers in the eastern metal division was announced by G. F. Henschel, division sales manager. Previously district sales manager of metal specialties, Mr. Mason is succeeded by J. A. Corry who was new products coordinator for aluminum cans.

At the district level, Orren R. McJunkins, vice-president, announced the appointment of S. B. Smart, as general manager of the mid-eastern district in the metal division. Mr. Smart was formerly Milwaukee district sales manager and is succeeded in that post by David Wilson who had been assistant district sales manager in New York. T. V. Carley is now New York district sales manager and was formerly district sales manager

in Boston. Replacing him is P. H. Black, previously assistant products sales manager for non-processed food and meat cans.

New Markem Machine

A new marking machine for imprinting individual filled plastic "pillow packs" which are used for packaging cosmetics, drugs and pharmaceuticals, chemicals, and oils, was introduced recently by Markem Machine Co., 191 Congress St., Keene, N.H. Designated model 45A, the machine is said to be capable of printing five sizes of packs with an average production of 50 packs per minute including type changes. Markem airdry inks available in a full range of colors are used with the machine.

Plax Appoints Gaines

The appointment of L. E. Gaines, Jr., as sales manager in the Cincinnati district for Plax Corp., Hartford, Conn., was announced last month by S. F. Schillaci, vice-president. Mr. Gaines joined Plax in 1954 as a sales representative and was responsible for major plastic container accounts in the New York area. Prior to his new appointment he was assistant sales manager in the Chicago district.

Tuttas of Crown to Speak

S. V. Tuttas, vice-president of sales for Crown Cork and Seal Co., Philadelphia, will be one of



S. V. Tuttas

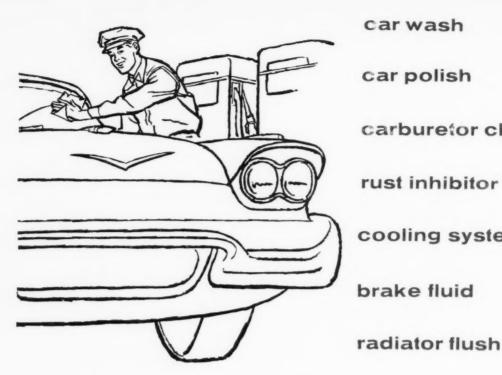
the principal speakers at the seventh annual marketing conference of the National Industrial Conference Board scheduled for Sept. 16-18 at the Waldorf-Astoria Hotel, New York. He will speak at an afternoon session on Thursday, Sept. 17. His subject will be "Motivating Salesmen to Better Performance."

Canco Names PR Director

The establishment of a public relations department and the appointment of William H. Dinsmore as its general manager at

"Sted" low foaming detergent, "Sted-Break", "Sted-Bleach" for stain removal, and "Sted-Brite" by Cowles Chemical Co., Cleveland, now come in small units containing enough of each product for one nine pound washer load. Designed for sales in vending machines in self service laundries all four products are packed 240 packets per carton.





car wash car polish carburetor cleaner rust inhibitor cooling system sealer brake fluid

Show off your family of auto products in Continental's family of Cone Tops

...your most economical container gives you the top in prestige

Let Continental's uniform line of Cone Top cans identify your automotive products as a family. They'll give your entire line a qualitylook that means extra sales power. And Continental Cone Tops give you these other positive advantages:

LOWEST COST: Continental Cone Tops are the lowest priced containers made for automotive products. Give your specialties the benefit of prestige packaging at a thrift price.

FULL SIZE RANGE: Continental Cone Tops are available in a wide variety of sizes ranging from 4 oz. to 16 oz. There's a size that's right for each of your automotive products.

PROMPT DELIVERY: Continental has shipping points throughout the entire U.S. No matter where you operate, you can depend on Continental for prompt delivery. Call Continental today.



Eastern Division: 100 East 42nd Street, New York 17 Central Division: 135 South La Salle Street, Chicago 3 Pacific Division: Russ Building, San Francisco 4
Canadian Division: 590 Bay Street, Toronto, Ont





What's New?

Just added to line of associated products department of Colgate - Polimolive Co. New York is "Arctic" surgical liquid soap containing hexachlorphene as bacterio static-deodorant ingredient. Described as a "bland liquid soap with excellent lathering and rinsing qualities in hard or soft water." it is diluted with two parts of water to conform with requirements of U.S. Pharmacopoeia "Arctic" contains Sinder Corp's "G-11" brand hexachlorphene In addition to one gallon American anown, product

can snown, profuss comes packaged in 5-gal pails, and 30 and 55 gal drums. Calmar plastic pumps are furnished for all sizes.

"Teb instant shoe polish,"
(three bottles lower left)
and "Soft Magic" laundry
rinse were announced recently by Research & Development Co., Atlanta,
Both products are marketed
principally in southeastern
U. S. "Teb" is a water repellent, liquid "instant" polish that comes in 10 colors.
It is packed in 2 oz. clear,
square, glass bottles. "Soft
Magic" contains du Pont's
"Zelcon" fabric softener and
is packed in quart glass
bottles. Both bottles are by
Anchor Hocking Glass
Corp., Lancaster, O. Closures are by Armstrong Cork
Co., Lancaster, Pa., polish
applicators by A. P. Applicator Co., Pleasantville,
N. Y., and labels by Conger
Printing Co., Atlanta.

Adoption of push-button packaging for its "Afta" cleaning fluid was announced recently by Afta Solvents Corp., New York. Designed for use on a wide range of labrics and materials, new "Afta Push-Button Cleaning Fluid" comes packed in can by Continental Can Co. Labels are printed in red, white, yellow and blue. Valve by Precision. Retail price: \$1.98.







One dozen 16-ounce bottles of its "Enriched Creme Shampoo" are being offered to retailers by Richard Hudnut, Morris Plains, N. J., in corrugated shipper which sets up for counter display, self-selling or floor stacking. Each shipper contains a collar type display card. Bottles are from Maryland Glass Corp., Baltimore. The shampoo retails for \$1.10.

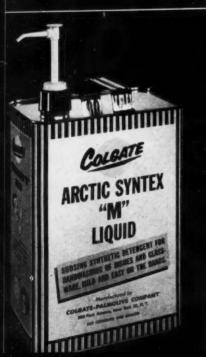
Redram Chemical Co., Brooklyn, N. Y., has introduced "Aero Spray" insecticide for mosquito control in airplanes and ships. Product is packaged in a 12-ounce aerosol can from Crown Cork & Seal Co., Philadelphia, with a valve from Aerosol Research Co., Forest Park, Ill. Two color label is in black and gold.





Three quarter ounce purse-size hair spray is a free premium from Charles Antell, New York, with a bottle of its shampoo. Valve Corp. of America. Bridgeport, Conn., designed the aerosol container and also supplies the valve and actuator. Epon-coated aluminum tube is by Peerless Tube Co., Bloomfield, N. J. Container colors are blue and white with blue plastic overcap and actuator.

The associated products department of Colgate-Palmolive Co., New York, recently introduced "Bouquet Floral," a toilet soap for the hotel and institutional trade. Marketed only through distributors, the new soap is said to lather in hard or soft, and hot or cold water. Wrapper, from S. D. Warren Co., Boston, is maroon and white.





A new liquid detergent from Colgate-Palmolive Co., New York, is "Arctic Syntex M' Liquid" for handwashing of dishes, silverware and glassware. American Can Co., New York, supplies the one gallon can. Plastic plunger pump, from Calmar Co., Los Angeles, is included with each case of six cans and with each five-gallon drum. It is being marketed exclusively through jobbers.

Windsor Wax Co., Hoboken, N. J., recently introduced a new liquid floor wax designed for use in hospitals. Said to have a high carnauba wax content and to impart a slip-resistant and water resistant film, the product may be used on all types of flooring. It is packed in one, five, 30, and 55 gallon steel drums and pails supplied by U. S. Steel Products Division. They are decorated by silk screening at the Windsor plant.

Colgate-Palmolive Co., New York, recently introduced "Ajax" cleanser with chlorine bleach for commercial use. Said to disinfect as it cleans, the product is being marketed exclusively through jobbers as a companion to "Ajax" with regular bleach. It is packaged in 14 and 28 ounce fibre cans, metal parts of which are from Continental Can Co., New York. Labels are supplied by Reynolds Metals Co., Louisville, Ky., and Lustour Corp., Clayton, Mo.

New aerosol packaged paint called "Multy K-Lor Textured Paint" was recently announced by Redram Chemical Co., Brooklyn, N. Y. It will be released for distribution next month. Crown Cork & Seal Co., Philadelphia, supplies the 16-ounce aerosol container and aerosol Research Co., Forest Park, Ill., provides the valve.

Lever Brothers Co., New York, recently completed national distribution of white "Lifebuoy" deodorant soap said to be the first of its type that will remain white in use. The new product comes in a blue, white, and gold wrapper with the regular size retailing at about two for 23 cents and the bath size at about two for 33 cents and

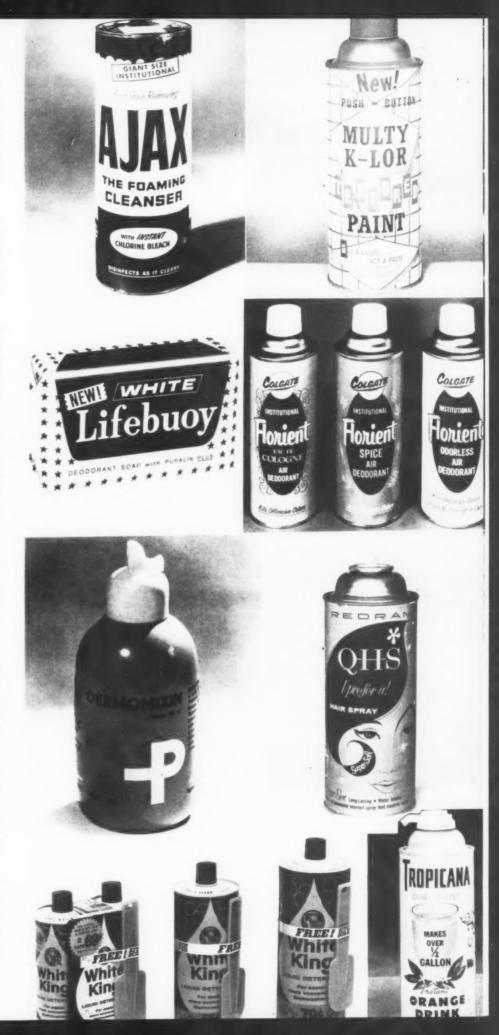
A new air deodorant from Colgate-Palmolive Co., New York, is "Institutional Florient" especially formulated for institutional use. It comes in three types—eau de cologne, spice, and odorless—and is packaged in 16 ounce aerosol containers from Crown Cork & Seal Co., Philadelphia. Valves are by Precision Valve Corp., Yonkers, N. Y., and overcaps are from Plastic Molded Products Co., Chicago.

A bactericide called Dermomixin made by Pierrel, Sp.A., of Italy is said to be the first aerosol packaged pharmaceutical produced in that country. Solfrene, Sp.A., Milan, licensee of Risdon Manufacturing Co., Naugatuck, Conn., supplies the valves and fills the plastic coated glass bottles made by Bormioli in Parma, under license from Durable Plastics, Ltd., a British company

"Q-H-S" stands for quick hair set, a hair spray from Redram Chemical Co., Brooklyn, N. Y. Product formulation contains essential oil supplied by Felton Chemical Co., Brooklyn, N. Y. Crown Cork & Seal Co., Philadelphia, provides the 16 ounce aerosol container and Aerosol Research Co., Forest Park, Illmakes the valve and actuator button.

An on-the-package free premium of a plastic scraper for pots and pans is attached to the 12 ounce twin pack, one pint, and quart cans of "White King Liquid Detergent" from White King Soap Co., Los Angeles. The offer is supported with newspaper and radio advertising and in-store shelf talkers in an effort to promote sales of the product.

Tropicana, Bradenton, Fla., is packaging a new pure orange juice concentrate in 16 ounce aerosol containers from American Can Co., New York, under nitrogen pressure. Plastic spout and valve are from Precision Valve Corp., Yonkers, N. Y., as is the nylon dip tube. The nine and a half ounces of concentrate in the container are reported to yield better than a half gallon of juice





Whether your product requires liquid filling by gravity...or aerosol filling (with hydrocarbons, halocarbons, or nitrogen and other inert gases as propellants)...in can,

glass or plastic containers...we have complete facilities for handling the job, large or small. Let us help you solve your filling probems...write, phone or wire





"Knox gives us on-time delivery, quality glass," says Vice President of leading detergent firm

"Our total sales have increased more than 35,000% in the past five years," says the Vice President of one of the nation's foremost manufacturer's of all-purpose liquid detergents.*

"In addition to a fine new product and a good advertising program, cooperative and able suppliers—like Knox Glass—have played an important part in our success.

"Fifteen years ago, when we first started doing business with Knox, we used very little glass. Today, with our *Name available on request.

capacity at 60,000 cases a day. Knox is still our major glass container supplier.

"We use Knox because they have always given us a top quality product and because they consistently deliver both pint and quart bottles on time—at the plant when we need them."

Find out how Knox quality and delivery can add value to your packaging operation. Contact Knox Glass, Inc., Knox, Pennsylvania.

the new/knox glass



GET THE FACTS ABOUT THE MANY ADVANTAGES OF

G. BARR COMPANY TWO-PLANT AEROSOL PACKAGING



In New York—as in Chicago—you can enjoy the outstanding research, product development and precision aerosol packaging service of a G. Barr & Company local plant and also share in the many advantages of G. Barr & Company two-plant operation.

Among these advantages are the potential savings in both shipping and production costs. You also enjoy the benefits of our unsurpassed laboratory facilities, of our two-plant buying power, our time-tested quality controls and the important know-how gained over the years in the production of hundreds of millions of aerosol packages.

There are many other important pluses which *only* G. Barr & Company can offer. We would like to tell you about them, at your convenience and without obligation.

Just contact our nearest office for facts.



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G. BARR & COMPANY

PRIVATE LABEL AEROSOLS

American Can Co., New York, was announced last month by William C. Stolk, president. The department is responsible for corporate public relations activities and those of the firm's Bradley-Sun, Canco, Dixie Cup, and Marathon (paper) divisions. Previously Mr. Dinsmore was with General Electric Co., Schenectady, N.Y.

Carle Conway Dies

Carle C. Conway, 81, former chairman of the board of directors and chairman of the executive committee of Continental Can Co., New York, died Aug. 18th at Lake Placid, N.Y. Mr. Conway was associated with Continental from 1907 to 1958. He became board chairman in 1930 and was succeeded in that post by Lucius D. Clay in 1950. Last year Mr. Conway resigned as chairman and a member of the committee because of ill health.

Packaging Meetings Set

Basic programs for two events of the Packaging Institute. New York 17, were announced last month. The first is the second "Packaging Seminar for Professional Members" which will be held Oct. 1st at the Sheraton-Blackstone Hotel in Chicago. Similar to the first seminar conducted by the Institute last February, this event will feature a panel of packaging experts who will hold a round-table discussion and answer questions submitted in advance by professional members. There will be no prepared speeches.

The 21st annual National Packaging Forum will be held Nov. 16-18 at New York's Statler Hilton Hotel. The theme for this year's forum is "Industry's Launching Site for Projecting Packaging Progress." Roy W. Abling of Merck Sharp & Dohme, Rahway, N. J., division of Merck & Co., is forum chairman. Among luncheon speakers so far scheduled is William C. Stolk, president of American Can Co., New York. Delbert Johnson, advertising manager, Continental Can Co., New York, is chairman



New directors of Buck Glass Co.. Baltimore, which was recently acquired by Knox Glass, Inc., Knox, Pa., and others involved in the purchase are, front row, left to right. W. A. Seger, Buck director and vice-president of sales; Royden A. Blunt. Buck president and director; A. W. Wishart. Knox president and chairman and chief executive officer of Buck; and Clarence R. Deible, Knox administrative vice-president and Buck director and executive vice-president.

Rear row, left to right, are J. D. Lynch. Knox secretary: Henry A. Koenig. III. Buck treasurer and controller; A. W. Lansberg, Buck director and Knox treasurer and controller; Richard B. Buck, secretary of Buck: W. M. LaVenture. Knox general counsel; and Thomas Wellington of Reynolds, Richards, Ely & LaVenture. New York law firm.

of the package marketing seminar which will be held Monday afternoon, Nov. 16th. Other seminars will be held in research and development; drug and pharmaceutical; production line and machinery; printing; industrial packaging; food; and closure.

Potdevin Machine Co., Teterboro, N. J., recently introduced this labeling machine from Rawsons, Ltd., England.



New Labeling Machine

A new semi-automatic high speed labeler developed by Rawsons, Ltd., Kent, England, was recently introduced in the United States by Potdevin Machine Co., 285 North St., Teterboro, N.J. Called "Autorex," the machine is designed to label a variety of packages and products and is adaptable to irregularly shaped bottles, collapsible tubes, and aerosols. Produced in conventional adhesive (illustrated) and heat seal models, the machines are said to be easily integrated into existing packaging operations.

Continental Elects Carty

The election of John N. Carty as treasurer of Continental Can Co., N. Y., was announced recently by Lucius D. Clay, board chairman. Previously assistant treasurer, Mr. Carty succeeds Loren R. Dodson, who retired after 31 years service with the company.

Gen. Clay also announced the election of R. Leonard Carlton as assistant treasurer and his appointment as credit manager.

Aerosol Awards...

The eighth annual AEROSOL PACKAGE CONTEST will be held in conjunction with the 46th Annual Meeting of the

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION

MAYFLOWER HOTEL, WASHINGTON, D. C. DECEMBER 7-9, 1959

. . . will include judging and selecting of best aerosol packages of the year

The aerosol package competition and awards will be divided into eleven classes as follows:

- 1. Insecticides, repellents, moth proofers.
- 2. Room deodorants
- 3. Lacquers, enamels, other protective coatings; paint remover.
- 4. Other household products polishes, glass cleaner, rug shampoo, water repellent, snow, etc.
- 5. Shave products.
- 6. Hair preparations.

- 7. Perfumes, colognes, toilet waters.
- Other personal products shampoo, body deodorants, dentifrices, sun tan oil, etc.
- Medicinal and pharmaceutical products.
- Industrial products lubricants, belt dressings, stencil inks, etc.
- 11. Food products.

... a top award for "best in the show" will also be made

Rules of the contest:

- 1. Awards will be made on the basis of general sales appeal of the complete package. The awards are given for package design only and do not constitute endorsement of the product, container, valve, label, or other part of the package, nor do they constitute a determination that the package or labeling meets applicable state or federal laws or regulations.
- 2. All entries must be made in the name of the brand owner or marketer. Products must have been freely offered for sale prior to September 1, 1959.
- 3. Entries will close October 15, 1959. All entries should be sent as soon after September 1 as possible to the Committee at the CSMA office, and should comprise one completely assembled empty container with attached tag showing (a) name and address

- of brand owner; (b) class in which entry is made by number noted above. Send one completed entry blank for each package entered. (Entry blanks will be sent promptly to anyone on request.)
- Entries may be made in as many classes as desired by the same marketer or brand owner.
- 5. Entries are open to any brand owner anywhere and are not restricted to members of CSMA. There are no entry fees or other charges to entrants. The committee reserves the right to reclassify any entry prior to judging and to reject any entry it deems advisable.
- 6. Best packages will be selected in eleven classes noted above and a "best package in the show" will be chosen. Judging will be by a group of qualified persons. Their decisions will be final.

For information and entry blanks, write to AEROSOL PACKAGE AWARDS COMMITTEE Chemical Specialties Manufacturers Association 50 East 41st St., New York 17, N. Y.

MAKE PLANS FOR YOUR ENTRIES NOW!

NEW Erade Marks

Spindrift—This for detergent for washing pots and pans and for general cleaning purposes. Filed May 1, 1958 by Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Claims use since Mar. 26, 1958.

Zep-O-White-This for cleansing composition for white sidewall tires. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlar Claims use since March 1951. Atlanta, Ga.

Zep-D-Luxe—This for liquid hand soap. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1958.

Zepolan - This for lanolated hand cleansing preparation. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March

Zep-I-Dine 30-This for cleaning preparations having incidental sanitizing properties. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March

Zen-O-Brite-This for scouring cleansers. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Manufacturing Corp., Atlar Claims use since March 1955.

Zep-O-Kreme-This for liquifying hand cleansing preparation. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March 1952.

Zep-O-San — This for toilet bowl and urinal cleaning preparation having incidental deodorizing and disinfecting properties. Filed Dec. 31, 1958 by Zep Manufacturing Corp., Atlanta, Ga. Claims use since March

Prepare-This for mild cleanser with detergent properties for floors, Filed Feb. 2, 1959 by Columbia Wax Co., Glendale, Calif. Claims use 15, 1956

Acrilax - This for acrylic base wax for floors and like surfaces. Filed Dec. 8, 1958 by Hysan Products Co., Chicago. Claims use since July 31,

Du Jet - This for liquid steam cleaning preparation. Filed July 17, 1958 by The DuBois Co., Cincinnati. Claims use since Mar. 18, 1958.

230 - This for waterless hand cleaner. Filed Feb. 2, 1959 by Southwest Grease & Oil Co., Wichita, Kans. Claims use since Dec. 23, 1958.

Tender Loving Care - This for liquid detergent. Filed Feb. 6, 1959 by Paul F. Beich Co., Bloomington, Ill. Claims use since Jan. 21, 1959.

Electrolux — This for floor waxes and furniture polish. Filed Jan. 5, 1959 by Electrolux Corp., New York. Claims use since March 1947. "No-Lite"—This for bird re-

pellent for application to bird resting areas. Filed Jan. 12, 1959 by Birds-Off, Inc., McKeesport, Pa. Claims use since on or about Nov. 15, 1958.

Mediko-This for liquid soap Filed June 20, 1957 by Acme Chemical Co., Milwaukee, Wis. Claims use Co., Milwaukee, since Jan. 8, 1929.

Mystic Foam—This for clean-preparation having incidental deodorizing properties for upholstery, furniture, carpets, draperies, tapes-tries, and other fabrics. Filed Feb. 9, 1959 by Dumas Milner Corp., Jackson, Miss. Claims use since Dec. 15,

Little King—This for laundry detergent. Filed Feb. 18, 1959 by King Kullen Grocery Co., Jamaica, N. Y. Claims use since Oct. 17, 1957.

Comet — This for floor wax. Filed August 23, 1957 by East Coast Soap Corp., Brooklyn, N. Y. Claims use since July 15, 1957.

Coronet — This for floor wax. Filed Aug. 23, 1957 by East Coast Soap Corp., Brooklyn, N. Y. Claims use since July 15, 1957.

Zip—This for spray type shoe polish. Filed Mar. 9, 1959 by Rutang Corp., Miami, Fla. Claims use since

Corp., Miami, Fla. Claims use since Oct. 7, 1957. LS.R.—This for ice and snow

remover. Filed Jan. 28, 1959 by Utility Chemical Co., Paterson, N. J. Claims use since Sept. 10, 1958.

use since Sept. 10, 1958.

Tradewell—This for household bleach, deodorizer and disinfectant, and anti-freeze. Filed Mar. 9, 1959 by Tradewell Stores Inc., Seattle, Wash. Claims use since Aug. 15, 1958.

Kleenitol—This for soap for the store of the stor

Kleenitol — This for soap for cleaning tile, terrazzo, rubber, asphalt, vinyl, linoleum, cork, and wood surfaces. Filed Jan. 23, 1958 by Gerson Stewart Corp., Cleveland. Claims use since Sept. 20, 1927.

Wool-O-Lene — This for cold water soap. Filed Feb. 20, 1959 by Leeds Chemical Products, Inc., Chicago. Claims use since Feb. 25, 1957.

Easy Dust — This for liquid cleaning composition. Filed Feb. 24, 1959 by Earl Grissmer Co., Indianapolis, Ind. Claims use since Sept. 20, 1958.

Brocade-This for liquid detergent for general household use, Filed Feb. 24, 1959 by Safeway Stores, Inc., doing business as Newport Products Co., Oakland, Calif. Claims use since Jan. 19, 1959.

Blue Crown — This for glass cleaner, Filed Mar. 10, 1959 by Products Sales, Inc., Cleveland. Claims use since July 11, 1958.

Staph-O-Sol-This for aerosol sterilizer. Filed Feb. 20, 1959 by Cook Chemical Co., Kansas City, Mo, Claims use since Feb. 18, 1959.

Room Mate—This for spray type room deodorizer and air re-fresher. Filed Mar. 19, 1959 by Regal Chemical Corp., Brooklyn, N. Y.

fresher, Filed Mar. 19, 1909 by Regar-Chemical Corp., Brooklyn, N. Y. Claims use since Oct. 14, 1958. Tenderglow—This for cosmetic products and toilet preparations, namely, cream shampoos, Filed Jan. 30, 1959 by John H. Breck, Inc., Springfield, Mass. Claims use since Jan. 16, 1959.

Jan. 16, 1959.

Toss—This for concentrated laundry detergent, Filed Feb. 24, 1959 by Techno-Economic Services, Incorporated, doing business as Techno-Economic Services, Inc., Los Altos, Calif. Claims use since Feb. 9, 1959.

Virodine—This for sanitary rinse and cleaner, Filed Feb. 25, 1959 by Basic Chemicals Corp. Sarssota.

by Basic Chemicals Corp., Sarasota,

Fla. Claims use since June 17, 1957.

Wadpol — This for abrasives and polishing materials for aircraft. Filed Jan. 26, 1959 by Valay Industries, Ltd., London, England, Claims use since Oct. 31, 1952, and in commerce since Oct. 17, 1955.

Shyn-Maid — This for treated dusting, polishing, and wiping cloths. Filed Apr. 1, 1959 by Union Wadding Co., Pawtucket, R. I. Claims use since Mar. 3, 1948.

Mar. 3, 1948.

Aeromagic - This for aerosol packaged tar remover, and dust lay-ing compounds comprising an oil base dust spraying composition. Filed Nov. 12, 1958 by General Aerosols, Inc., 12, 1958 by General Aerosols, Inc., Shelton, Conn., assignee of Reed Re-search Corp., Shelton, Conn. Claims use since Sept. 24, 1958.

O-I Sales, Earnings Rise

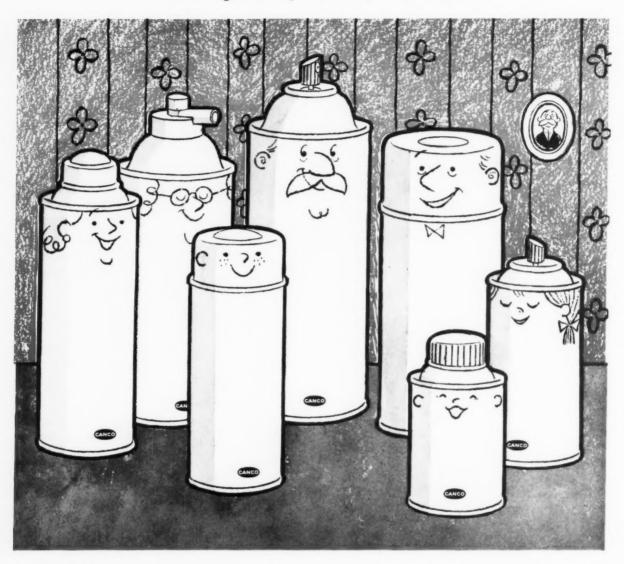
Net sales and earnings of Owens-Illinois Glass Co., Toledo, O., for the first half of this year were reported at an increase compared with the 1958 period. Net sales rose to \$267,290,984 from \$243,474,455 last year. Net earnings amounted to \$19,546,575, or \$2.50 per common share, compared with \$16,436,963, or \$2.07 in '58.

"Ajax" Top Package

Three products in the soap and chemical specialties field were among ten best packages recently chosen by nearly 250,000 consumers in a poll conducted by Better Packaging Advisory Council, New York. The products were "Ajax" scouring cleanser, packed in a fiber can and made by Colgate-Palmolive Co., New York: "Dial" shampoo of Armour & Co., Chicago, packed in a ridged plastic Plax Corp., squeeze bottle: and pressure packaged "Satin-Set Pin Curl" hair spray, a product of Revlon, Inc., New York.

The seven-month national survey was conducted by teams of professional interviewers who stationed themselves at exit points of all types of retail stores. They asked consumers emerging from these stores with their purchases only one question: "Of all the products you buy, which one has the best package?" Only one question was asked, according to Harrison Young, marketing director of the Council, because the object of the poll was to determine the consumer's personal and spontaneous reaction to package preference.

Canco has the largest family of Aerosol cans to fit your product needs!



Because Canco has the largest and most complete line of aerosol cans in the industry, you're sure to find the right container to fit your product requirements.

Canco manufactures seven sizes with standard oneinch cup opening or individually styled one-piece tops. Canco also offers an end-use warranty on these containers.

And remember—Canco's famous package design staff is at your service to create new sales appeal for your product with compelling color lithography.

Discover for yourself why so many successful aerosol packers depend on Canco. Call your Canco salesman!

A SAMPLE KIT containing all seven Canco pressure cans is yours free. It's available through your Canco salesman only. Ask him for yours, today!



CANCO AMERICAN CAN COMPANY

NEW YORK . CHICAGO
NEW ORLEANS . SAN FRANCISCO

PRESSURE PACKAGING

CSMA Aerosol Clinics to Feature Panels

FURTHER details on the proson of clinics, to be held in New York and Chicago on consecutive Saturdays in October, were announced late last month by the Chemical Specialties Manufacturers Assn. The Aerosol Division of CSMA is sponsoring the clinics, which are designed to provide basic and upto-date technical information on all phases of pressure packaging for representatives of companies interested in this method of packaging.

The clinics will be held Saturday, Oct. 17, at the Sheraton-Mc-Alpin Hotel, New York, and Oct. 21 at the LaSalle Hotel. Chicago. The sessions will run from 9:30 a.m. to 5:50 p.m., with a luncheon included in the \$12 registration for.

Highlights of both clinics will be two panel discussions. One will cover problems of aerosol formulation, the other will deal with commercial filling methods and problems. Panelists who will discuss aerosol formulation problems at the New York clinic include: Milton Fowks, PowrPak-Conn-Chem. Inc., Bridgeport, Conn.: Philip M. Prussack, chief chemist of Associated Brands, Inc., Brook-Ivn: Daniel H. Terry, Boyle-Midway Division, American Home Products Corp., Cranford, N.J., and Fred Presant. Aerosol Techniques, Inc., Bridgeport, Conn. Commercial filling methods and problems will be covered at the New York clinic by Anthony Iannacone, Fluid Chemical Corp., Newark, N. L.; Albert Osman, Thomasson of Pennsylvania, Inc., Norristown; John Beacher, Avon Products, Inc., Suffern, N.Y., and John Hart, senior chemist, aerosol research and development department of John

C. Stalfort & Sons, Inc., Baltimore.

At the Chicago clinic, the panel on formulation problems will include: Montford A. Johnsen. Peterson Filling & Packaging Gorp., Danville, Ill.; William H. Walker, Continental Filling Gorp., Danville, Ill., Morris J. Root, G. Barr & Co., Chicago: Roland L. Rhodes, manager, research department, Real-Kill Co. division of Cook Chemical Co., Kansas City, Mo., and a representative of Sprayon Products, Inc., Cleveland.

Panelists who will review commercial filling methods and problems at the Chicago clinic will include: Paul Peterson, Aeropak, Inc., Chicago: G. F. Kessler, Plasti-Kote, Inc., Cleveland: James Plachy, Eveready Pressurized Products, Inc., Cleveland.

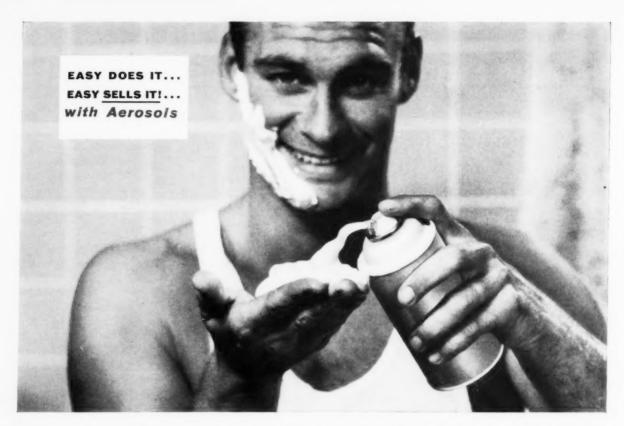
In addition to these panel discussions individual presentations will be made on acrosol principles, valves, propellants, historical and marketing data.

In addition to those speakers announced in the September issue of Soap & Chemical Specialties on page 19, D. C. Geary of Union Carbide Chemicals Co., New York, will discuss laboratory equipment and techniques. Ralph Crane of the Freon Products Division of E. I. du Pont de Nemours & Co., Wilmington, will speak on aerosol historical and marketing data. Other speakers and their subjects include: Lloyd T. Flanner, head of the "Genetron" aerosol technical service laboratory of General Chemical Division of Allied Chemical Corp., New York, who will speak on propellants. Walter C. Beard, director of research of the Risdon Manufacturing Company, Naugatuck, Conn., reports on valves. John J. Buchanan, chief of the aerosol development section, Continental Can Co., Chicago, reports on containers. Dr. Francis A. Mina, Lodes Aerosol Consultants. Inc., New York, will discuss aerosol principles.

Chairman of the aerosol clinic subcommittee is A. H. Lawrence, Jr., Freon Products Division, E. I. du Pont de Nemours & Co., and Joseph J. Tomlinson, General Chemical Division, Allied Chemical Corp., New York, is program chairman.**

Leonard L. Weiss, center, president, Central Warehouse Sales Co., Scranton, Pa., accepts the keys to a new Cadillac sedan, background, from James W. Bampton, president, Krylon, Inc., Norristown, Pa. The car was grand prize in a national sales contest sponsored by Krylon in which more than 2.000 of its jobbers competed. Others at the presentation ceremony, left to right, are: Richard C. Newbold, Krylon vice-president; Roy Cantell, Krylon sales representative; and Elmore E. Kayser, Krylon vice-president of advertising and promotion.





Easier-to-use aerosols SHAVE TIME!

How the magic touch of aerosol packaging has softened up the shave cream market

By majority vote at the cash register, most shavers agree: an aerosol shave is a faster, cleaner, easier shave! These advantages of pressurized shaving lathers sold over 50 million cans in 1958. They accounted for a greater dollar volume than the sales of *all* shaving creams, shaving soaps and shaving sticks combined!

Perhaps you have a product which could really soften up a market if packaged in aerosol form. If it can be sprayed, poured, brushed, dusted or daubed—then it's a likely prospect for aerosol packaging. And here's how General Chemical can help you.

Market Information—Helpful facts and figures on the aerosol market are available to present and potential aerosol marketers.

Expert Technical Service—General Chemical has one of the most complete aerosol development laboratories in the country. We will be glad to help you develop the right propellant and formulation compatible with your product, its container and its uses.

Technical Data — The results of our continuing research into new and better aerosols—including information about promising new aerosol formulations developed in

our "Genetron" laboratories—are published regularly in special bulletins and reports. Ask to be put on the mailing list for this advanced information.

Contract Fillers— We will also be glad to put you in touch with highly capable contract fillers in all parts of the country who will put up your product in aerosol form for test marketing and handle full commercial production as well.

For further information—or if you would like to arrange for a special market presentation—write today to "Genetron" Dept., General Chemical Division, Allied Chemical Corporation.

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aerosol propellants
Putting the "push" in America's finest gerosols



GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.

SOAP and CHEMICAL SPECIALTIES

Carbide Aerosol Chemist

Robert D. West was named to the position of aerosol formulation chemist it was announced by



Robert D. West

Union Carbide Chemicals Co., New York, last month. Mr. West will be engaged in developing and testing pressure packaged products at Carbide's new technical service laboratories in Eastview, N.Y. Part of these new facilities are due for completion this fall. They will serve the needs of Carbide's customers for its line of "Ucon" fluorinated hydrocarbon propellants.

Mr. West was most recently associated with Reed Research Corp., Shelton, Conn., specialists in aerosol formulation and testing. Previously he was employed in product research with Purex Corp., South Gate, Calif.

125 at Aerosol Outing

Close to 125 persons turned out for the fifth annual Acrosol Industry Invitational golf tournament, held Aug. 11, at Winged Foot Golf Club, Mamaroneck, N.Y. Of the 95 who played golf, Davis Phillipson of Acrosol Techniques, Inc., Bridgeport, Conn., won first low gross among the guests. Leonard G. Cannella of Continental Can Co., New York, was the winner in this category among the hosts.

Sal Noto of Sun-Lac, Inc., Newark, N.J., was winner of first low net (guests) and Stanley J. Goldberg of Aerosol Research Co., Forest Park, Ill., was host winner.

Second low gross for guests was won by Robert W. Svendsen of Chase Products Co., Broadview, Ill., while T. Starr was host winner. Louis G. Marvinney, Pharmaceuticals, Inc., & J. B. Williams Co., Cranford, N.J., took second low net for guests, and Lee Mason of Continental Can won as a host.

Other prize winners included John L. Marana of Western Filling Corp., Los Angeles, who was honored for making the longest trip to attend the affair; John Gabrielsen of Avon Products, Inc., New York, for nearest to the pin; Donald Burr of Terry Laboratories, Inc., New York, hit the longest drive and John De Elorza of Old Empire, Inc., Newark, N.J., received the "most guts" award.

New Aeropak Plant

Aeropak, Inc., Chicago pressure packaging house, has purchased new filling and warehousing facilities at Kearny, N. J., it was reported last month. The plant had previously been occupied by E. I. du Pont de Nemours & Co., Wilmington, Del.

The additional facilities will be operated by an Aeropak affiliate, Aeropak, N.J. The parent firm's sales organization will handle sales for the affiliate. Production at the new plant began last month.

Mojonnier Appoints Hoyt

The appointment of Grant V. Hoyt as service manager and assistant to the general manager of



Grant V. Hoyt

Mojonnier Associates Division, Katridge-Pak Machine Co., Franklin Park, Ill., was announced recently by George W. Heath, general manager. Previously with Acrosol Research Co., Forest Park, Ill., in sales and plant management, Mr. Hoyt is now responsible for coordinating Mojonnier's engineering, production, and service departments and also consults on sales matters. His previous associations include Alpha Engineering Works, Inc., Mt. Prospect, Ill., where he served in the aerosol division.

(Turn to Page 157)

Stability testing of aerosol products at G. Barr and Co., Chicago, reached research milestone recently when 15,-000th container was placed in shelf room by Miss Toni Lacey. Since shelf test procedure was begun four and one half years ago, four containers or every run of aerosol product have been shelf tested. Then, one of four is tested at intervals of one month, six months, one year and four years after date of production.





"Du Pont's technical know-how helps our customers develop or improve their aerosol products"

says Fred T. Reed of Du Pont

"Here at Du Pont we're continually working with our customers to help them make better aerosols," says Dr. Fred T. Reed of Du Pont's "Freon" Products Laboratory. "This work includes studies of compatibility, flammability, shelf life and a variety of checks on aerosol product performance. We use Du Pont's outstanding technical facilities to assist our customers with their aerosol formulation and product improvement projects."

Technical facilities available through Du Pont are just one of the many advantages you get at no extra cost when you buy Freon* propellents. Loaders or marketers of aerosol products can take advantage of many sales-building services which only Du Pont offers.

In marketing, Du Pont surveys help you expand sales of your products. Through national advertising and promotion, Du Pont works continuously to build markets for aerosols, bringing you a steady flow of new customers. In technical service, Du Pont know-how and experience can help you with aerosol development or solution of production problems. In manufacture of "Freon", Du Pont makes aerosol propellents recognized throughout the industry for their quality, performance and properties. And only Du Pont gives you virtually local delivery service from three plants in the U.S., one in Canada and a network of warehouses.

If you have a problem in any area of aerosol development, production or marketing, call or write the Du Pont office nearest you. And be sure you buy "Freon" for all your propellent needs.

graduated from Swarthmore Col-lege with a bachelor's degree in chemistry, then joined the Army. He served in the Pacific area during World War II, attaining the rank of captain, Following his discharge from the Army, Fred entered the University of Maryland, where he obtained his Ph.D. degree in chemistry. He joined the Du Pont Com-pany as a research chemist in 1950 and was assigned to the "Freon" Products Division. Fred has done a variety of work for the aerosol industry including methods for moisture analysis of propellents, propellent systems for low-pressure cosmetic aerosols and studies of anti-perspirant compounds. Currently, Fred is in charge of all sales service work for the aerosol industry at the "Freon" Products Laboratory at Chestnut Run near Wilmington,

E. I. du Pont de Nemours & Co. (Inc.)
"Freon" Products Division 319
Wilmington 98, Delaware

DISTRICT OFFICES
40 Worth Street
New York 13. N. Y.

7 S. Dearborn Street Chicago 3, Illinois

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BETTER THINGS FOR BETTER LIVING

FREON[®] propellents

*Freon and combinations of Freon- or F- with numerals are Du Pont's registered trademarks for its fluorinated hydrocarbon propellents.

METERED SPRAY **AEROSOL SPECIALISTS**

Exclusive, specially designed equipment for

RESEARCH to develop the right product

QUALITY CONTROL to make the package market

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First International Aerosol Congress Meets

AEROSOL fillers and their customers and suppliers from 16 countries gathered during the last week of June at the Maison de la Chimie in Paris for the First International Aerosol Congress. The meeting was sponsored by the European Federation of Aerosol Associations which has its head-quarters in Zurich, Switzerland. The federation is currently composed of I.A.A. (International Aerosol Association) also head-

quartered in Zurich, which consists of members from countries without national committees; Interessengemeinschaft Aerosol, Frankfurt, Germany; Comite Francais des Aerosols, Paris, France; and the Finnish Aerosol Association. National committees which will apply for membership in the federation are reportedly being formed in England, Spain, Italy, and Denmark.

Over 400 representatives attended the aerosol meetings, held

concurrently with the Conference Internationale des Arts Chimiques which convened in Paris from June 18 to 29. Technical subjects discussed on the first day included among others; physicochemical problems presented by perfuming of aerosols; aerosols applied to the pharmaceutical industry: determination of granulometric characteristics of aerosol sprays; pressure packaged coatings; and standardization of pressure packages and their components. An open discussion on propellants was part of the technical program.

On the second day of the meeting it was agreed to work towards internationally uniform standards for glass and metal containers. During the coming year the French aerosol committee agreed to work on the development of standards for glass; the German committee has been charged to do the same for metal.

Gerald M. Mayer, head of Precision Valve International and president of IAA, was elected president of the European Federation of Aerosol Associations. Two vice presidents were also chosen at the Paris meeting: Francois Harlan, head of the French Aerosol Committee and president of Establissements de Trevise; and Wilhelm Staehle, president of the German Aerosol Committee and general manager of Mouson.

Countries represented at the First International Aerosol Congress included: Austria, Belgium, Denmark, Finland, France, Germany, Holland, Israel, Italy, Norway, Spain, Sweden, Switzerland, Yugoslavia, U. K., and U. S.



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FOR PROTECTIVE AND DECORATIVE AEROSOL FILMS

PVP/VA copolymers are especially suitable for aerosols designed as:

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PVP/VA copolymers are compatible with many modifiers and plasticizers so that hygroscopicity, flexibility, and abrasion resistance may be varied over a wide range. Organic solvents are not necessary for stripping these copolymer films as they are water removable.

PVP/VA copolymers are supplied as 50% solutions in SDA-40 anhydrous ethanol (E series) for cosmetic applications and as 50% solutions in anhydrous isopropanol (I series) for noncosmetic uses.

PVP/VA E-735 (70% vinylpyrrolidone/30% I-735 vinyl acetate copolymer)

I-735 / vinyl acetate copolymer)
PVP/VA E-535 (50% vinylpyrrolidone/50%
I-535 / vinyl acetate copolymer)

PVP/VA E-335 (30% vinylpyrrolidone/70% vinyl acetate copolymer)

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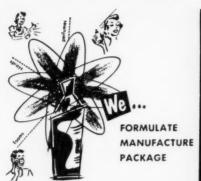
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(From Page 151)

At the same time, Mr. Heath announced the appointment of William Prena as a product engineer. He was formerly chief engineer with Aerosol Research.

PMMI Show Scheduled

More than 150 exhibitors have leased all available space for the Packaging Machinery Manufacturers Institute Show scheduled for the New York Coliseum, Nov. 17-20. The show will be held on the first floor and first mezzanine of the building. In an effort to limit attendance at the show strictly to the trade interested in packaging machinery, a registration fee of \$2 will be charged which will be good for the entire run of the event. according to Russell Sears, PMMI executive director.

McKernan W. Penn Rep.

West Penn Manufacturing & Supply Corp., Brackenridge, Pa., fabricator of "Aerosol Cover Caps" and "Secure Seal" screw caps for glass containers announced last month the appointment of E. J. McKernan of E. J. McKernan Co., Elgin, Ill., as midwestern representative

Mr. Mc Kernan, who is located at 314 East Chicago Street, Elgin, is exclusive representative



Edward J. McKernan

for West Penn's line of "Aerosol Cover Caps" in the states of Illinois, Indiana, Minnesota, and Wisconsin. He is responsible for sale, and service to actual and potential accounts within this territory.

Risdon Names Western Rep.

Risdon Manufacturing Co., Naugatuck, Conn., announced last month the appointment of Smith

C. L. Bartman

R. C. Smith





Sales Co., 972 S. Goodrich Blvd., Los Angeles, Calif., as Western sales agency for its aerosol, cosmetic and metal goods divisions. Aerosol valves and containers are among the products manufactured by these divisions.

Smith Sales, headed by Clyde L. Bartman and Roger C. Smith, will serve as sales and service link between Risdon and industrial consumers in California, Arizona and Nevada.

Roger Smith, son of A. C. Smith who founded the firm in 1922, joined Smith Sales in 1915 after 10 years with the engineering department of Douglas Aircraft

Clyde L. Bartman became a partner in Smith Sales in 1954 on the retirement of the founder. He had been associated with Milwaukee Stamping Co. for 27 years.

Air Reduction Test Lab

Air Reduction Co., New York, announced plans last month for the construction of a test laboratory in Franklin Township, N. I. Designed to supplement the facilities of the company's central research laboratories in nearby Murray Hill, N. J., the new laboratory will be devoted to research on fuels and oxidizers. It will provide facilities for labortory, prepilot, and pilot scale operations.

"Slikote" is a new aerosol packaged product from Speco, Inc., Cleveland, which is designed to prevent snow from sticking to shovels, pushers, plows, or snow throwers. It is packed in 16 ounce aerosol containers are fitted with Precision valves. Corrosion Reaction Consultants, Philadelphia, has introduced another aerosol packaged product to protect metal surfaces and prevent corrosion. Soon to be reintroduced as "CRC 3-36," in 12 ounce aerosol cans, the product is claimed to impart a

continuous film which penetrates grain boundaries, clings to, and seals metal surfaces.
"Spray Starting Fluid" for gasoline and diesel engines from Spray Products Corp., Camden, N. J., is now being marketed in a newly decorated container from Crown Cork & Seal Co., Philadelphia. The new package is white with orange lettering. Precision Valve Corp., Yonkers, N. Y., provides the valves and Phoenix Metal Cap Co., Chicago, makes the caps.







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Book Reviews

New Patents

Soap Plant Observer

Bulletins & Equipment

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Production SECTION

Soap Plant Corrosion Control

ONVENTIONAL protective coatings designed to prevent rusting do not afford satisfactory protection for equipment used in the production of synthetic detergents or soaps. Corrosive substances commonly used in soap making cause severe damage to the usual protective coatings. Such substances include: steam and water, caustic alkalies, soda, trisodium and other phosphates, salts, fatty oils, free fatty acids of various chemical compositions, fatty acid soaps, fatty alcohol sulfates, alkyl aryl sulfonates, and organic solvents. The corrosion problem is aggravated by elevated processing temperatures of 100° C. and higher.

Steel and concrete are the most commonly used materials of construction in a soap plant. Protecting them serves a twofold purpose: to lengthen the life of plant and equipment by shielding the surfaces from the corrosive influence of certain substances and to minimize contamination of raw materials and finished products by iron compounds. The presence of iron salts in soap causes deterioration of color, odor and storage properties. Like other metallic soaps containing polyvalent metals iron salts are catalysts of oxidation.

The general use of high grade alloy steel or other corrosion proof metals as construction materials would be the ideal answer to the question of corrosion. This solution, however, is economically impractical. Use of plastic linings is strictly limited: they are quite expensive and, futhermore, few plastics are equal to the chemical and thermal demands of soap making.

Oil-based coatings are not suitable since they are readily saponified by alkalies. Chlorinated rubber paints, on the other hand, possess good acid and alkali stability but they are destroyed by fatty oils and are stable to heat only within certain limits. Thus the "classic" anti-rust coatings of industry must be ruled out for effective use in a soap making establishment.

New Lacquers Help

Recent developments in lacquer technology have supplied the soap and synthetic detergent producer with a number of new tools to overcome corrosion problems preculiar to his trade. These include so-called "two-component" lacquers based on polyurethanes. or amine hardened epoxy resins, and coatings formulated from mixed vinyl polymers. After addition of a hardener, the "two-component" lacquers form insoluble films that present unusual resistance to chemical attack and mechanical abrasion. While there are many such coatings, those based on polyurethanes or epoxy resins are best suited for application in plants producing synthetic detergents and and soaps. Both systems yield films which are stable not only to chemicals in aqueous solutions, but also to organic solvents. This last feature is of special importance in soap production. Because they have long carbon chains, fatty

acids and fatty acid soaps act not only as alkalies or acids, but also as organic solvents. The exceptional degree of resistance to saponification exhibited by amine hardened epoxy resin films is quite remarkable. These films can be used successfully under the most alkaline conditions in extreme heat or cold.

Coatings having as major components mixed vinyl polymers dry simply by solvent evaporation. In contrast to "two-component" systems, they yield reversible films, i.e., films which remain soluble in the original solvent. However, films formulated from polyvinyl resins offer specific resistance to certain corrosives. This resistance may be higher than that of other systems, which makes polyvinyl films valuable in specialized applications.

Coatings on exteriors of containers, machinery, plants, etc., if intelligently chosen and correctly applied, will give a high degree of protection. Good results with exterior coatings have been obtained over periods of up to four years. Chemical attack on coatings applied to exterior surfaces is less severe and usually only intermittent. In addition, temperatures of substances coming in contact with exterior coatings are not high enough ordinarily to boost corrosivity of chemicals.

Coatings applied to interior surfaces are exposed to far

Recent developments in lacquer technology have supplied soap and detergent producers with new tools to lick corrosion more severe attack, as well as to greatly elevated temperatures. Such linings may consist of from one to six coats, ranging in thickness from 30 to 200 microns. The following observations relate to linings for coating interior surfaces.

1. Fatty Oils: For all practical purposes, iron as well as concrete can be protected effectively against the corrosive effects of fatty oils by using coatings derived from polyurethane, epoxy resin, or polyvinyl. These coatings offer protection at elevated temperatures and in the presence of normal amounts of free fatty acids. Epoxy resin based linings for concrete storage tanks are very effective and have been known to hold successfully palm oil even under tropical conditions. The linings withstood the alkalinity of the concrete as well as the solvent effect of the fatty oil.

2. Fatty acids: Of all the compounds commonly encountered in the soap plant, fatty acids are the most corrosive to enamel and lacquer films. The strong solvent effect and high acidity of fatty acids having short chain lengths is well known. As chain lengths increase, the chemical behavior of fatty acids is more like that of the hydrocarbons; fatty acids with 16 or more carbon atoms are less corrosive. Unsaturated or hydroxy fatty acids are usually more destructive than saturated acids of equal chain lengths. It is most difficult to protect against the effects of fatty acids of medium chain lengths (about 10 carbon atoms), since these compounds not only exert a strong solvent effect but also have pronounced acid characteristics. The presence of considerable water and the need for elevated temperatures further complicate the task of protecting detergent and soap processing equipment. Coatings which provide good resistance to higher concentrated mineral acids may be attacked and destroyed within a few hours by hot mixtures of fatty acids and water. A comparatively high degree of resistance to the

corrosive effects of fatty acids is exhibited by high grade baked enamels formulated with epoxy phenolic combinations. However, it is impractical to attempt to protect larger surfaces with such coatings.

New Mixing Machine

A new planetary mixing and kneading machine was introduced recently by J. M. Lehmann Co., Lyndhurst, N.J. Designed for use with highly fluid, viscous, or pasty materials, the machine has two mixing spindles equipped with helically arranged vanes which move along the tank wall while rotating at a high speed around their own axes. The mixing mechanism may be raised or lowered automatically and there is a device for controlling tank speed. Swivel, tilting, run-out, or stationary tanks are available in capacities of from one to 350 gallons. According to Lehmann, several types and power specifications of the mixer are available and the shapes and materials of the mixing tools may be varied depending upon requirements. Double wall tanks also can be furnished if heating or cooling is required in the mixing process.

New Lehmann planetary mixing and kneading machine for use with fluid, viscous and paste materials.



In practice, coatings of polyurethane and vinyl polymers are helpful in some phases of fatty acid processing. For example, these coatings are useful in lining storage vessels and shipping containers. Single or double coatings of a vinyl lacquer are reported to have given satisfactory protection for several years as linings for oneway shipping containers for fatty acids. Contamination of the fatty acid by iron salts can largely be eliminated by applying a protestive film of 35 microns thickness to the interior of the container. The lined drum is filled with hot fatty acid which solidifies on cooling. The fatty acid is melted in the drum by the appilcation of live steam and is thus removed at the user's plant without entraining any of the coating.

However, a complete solution to the problem of corrosion by hot fatty acid water mixtures has yet to be devised.

3. Caustic alkalies-soda. trisodium phosphate, alkaline soaps: In the past, the effect of strong alkalies on protective coatings was regarded as a serious problem. Today applications of amine hardened epoxy resin films supply the answer. Hardened lacquers of this type remain unimpaired even in contact with boiling alkalies since the films are completely unsaponifiable. Good results have been obtained for a number of years with amine hardened epoxy resin coatings applied to the interiors of alkali storage containers, vacuum driers, and even soap kettles. Such kettle linings, however, should be inspected and, if necessary, repaired after being in use for from 18 months to two years. Even small flaws which may be caused by physical factors can lead to trouble in the form of contamination by iron.

4. Fatty alcohol sulfates, alkyl aryl sulfonates, etc.; The types of coatings mentioned above have proved effective in protecting against the corrosive action of these surfactants.

Pretreatments of steel sur-

faces, prior to coating, is essential for long lasting protection. Thorough cleaning is all that is required in the case of one-way shipping drums. On the other hand, machinery, kettles, and storage tanks and containers made of steel must be sandblasted to metallic gloss even if this procedure is inconvenient for the plant. Although concrete does not require special pretreatment, newly poured concrete must be allowed to set and dry thoroughly prior to applying a protective coating.

Summary

Modern specialized protective coatings, if applied correctly, make an important and economically sound contribution to anti-corrosion measures in the detergent and soap industry. However, there still remain many parts of a soap making installation which must be made from corrosion proof materials, since the lasting properties of thin, protective coatings, naturally, are limited. M. von Mildenstein in Seifen, Oele, Fette, Wachse, No. 15, July 22, 1959, p. 453.

New Emery Bulletin

Emery Industries, Inc., Carew Tower, Cincinnati, has just published a technical bulletin entitled "Metholene" Esters for Alkylolamides. "Metholenes" are Emery's brand of methyl esters of fatty acids. They include methyl laurates, myristates, a palmitate, and a stearate as well as the methylester of whole coconut fatty acid. Reacted with alkylolamines these fatty acid methyl esters yield alkylolamides having a minimum active amide content of 90 per cent, according to Emery. This compares with an active content ranging from 60 to 70 per cent in alkylolamides made by reacting the amine with free fatty acids.

The 90 per cent alkylolamides exhibit good foam stabilizing and viscosity building properties and are extensively used in shampoos, household detergent formulations and other surfactant applications, Emery says.

New Type Wax for Aerosol Polishes

A new "Hoechst" wax particularly suited to aerosol formulation of floor polishes was introduced in this country recently by Hostawax Co., 350 Fifth Avenue, New York I, distributors of "Hoechst" modified montan waxes. Designated "FL" the new hard light colored ester wax, formulated with suitable solvents, forms liquid suspensions with a relatively low solidification point. Specifications of the product are:

Melting point : 94-98°C Acid No. : 30-35 Saponification No. : 90-105

In addition to great hardness and great hardening capacity for paraffin, "FL" wax imparts good gloss properties and yields a thin liquid polish of good stability over a wide temperature range, according to Hoechst. Formulations are said to remain sprayable at low temperatures.

"FL" wax may be formulated with an equal amount of paraffin. A high paraffin ratio makes the final product opaque, a low ratio increases transparency. Addition of "Hoechst" waxes of the "O" group yields very stable creamy liquid products. Incorporation of "F" wax gives an especially thin liquid polish.

Hostawax has just published a technical bulletin showing production methods and a number of suggested formulations of conventional liquid polishes. Two formulations for aerosol floor polishes are shown in table below.

These formulations are pressure packed in the following proportions: 50 parts by weight of liquid floor wax to 50 parts by weight of propellant. The propellant suggested in the bulletin is a 10:90 mixture of "Freon" 11 and 12.

Among the six suggestions for liquid floor polishes there is one for a 20 per cent liquid floor polish "top quality," thin liquid product, which calls for the following ingredients:

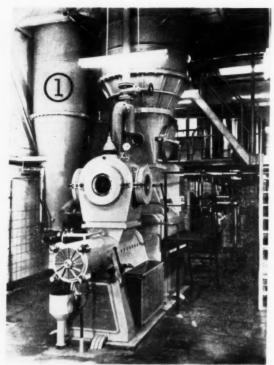
Wax "FL"	parts 8
Wax "F"	1
Ozokerite (70°C MP) or "Victory Wax 155" Amber by Bareco Paraffin wax, fully refined 50/52° Mineral spirits	1 10 80
	100

New Data on PVP

A booklet on polyvinylpyrrolidone as a modifier of toxic and irritating compounds has just been published by Antara Chemicals, sales division of General Aniline & Film Corp., 435 Hudson Street, New York 14. PVP modifies the physiological properties of certain germicides, detergents, toxicants, etc., by forming molecular adducts. The 8-page booklet reports experimental data pertaining to this property of PVP and suggests its use in industrial preservatives, disinfectants, weed killers, insecticides, etc.

	Formula AE-138 10% solids, glossy and hard film	Formula AE-139 15% solids, very glossy and hard film
	parts	parts
Wax FL"	3.5	5.0
Wax OM	1.5	2.0
Ozokerite, pure MP about 70° or		
"Victory" wax 155 amber of Bareco	1.0	1.5
Paraffin 50/52° or 52/54°C	4.0	6.5
Mineral spirits	90.0	85.0
	100.0	100.0

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For cooling, drying and extruding all kinds of soaps up to 84% T.F.A. Capacities range from 100 to 10,000 Kgs. per hour.

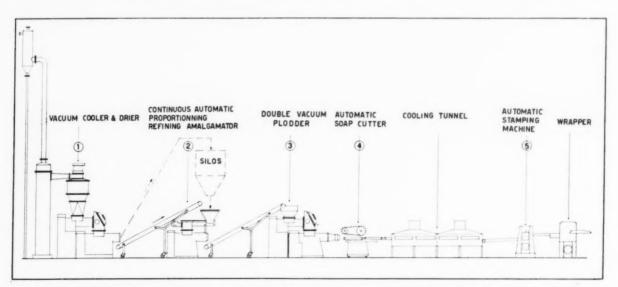
The "MAZZONI" continuous soap plants are outstanding because:

They are economical: Their requirements for steam, water and power are extremely low! Only one operator is required! No scrap soap is produced!

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They are extremely flexible: The same plant also can manufacture pure or built household soaps, flake and powder dried base, etc. from 35 to 84% T.F.A. and more.

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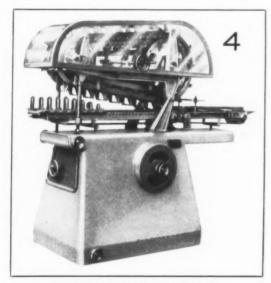
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CONTINUOUS AUTOMATIC PROPORTIONING REFINING AMALGAMATOR

Units shown on this page are available individually. They



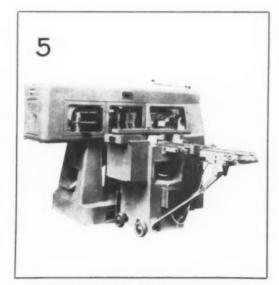
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Refiner and Extruder

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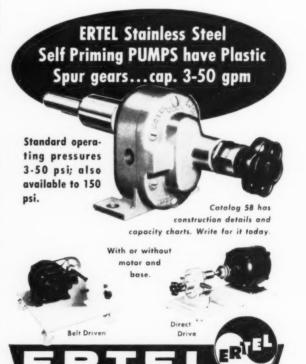
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NEW YORK

Book Reviews

Sequestering Agents

Sequestration is defined and its mechanism studied in a book which may be the first volume devoted entirely to this subject. The initial chapters deal with valency and basicity; the chelate ring and the influence of ligand and metal on the strength of bond; and stability of chelates and competitions in chelate systems. One chapter is devoted to a description and comparison of the chemical and physical properties of nine types of sequestering agents. E.D.T.A. and polyphosphates receive detailed attention.

Uses and applications of sequestering agents in 15 different industries are described. Their uses in the soap and detergents industry are classified under four headings: 1. Liquid formulations to prevent precipitation of sparingly soluble materials due to water hardness or impurities; 2. in any compound, liquid or solid, to overcome the effect in use of hardness and other salt in the water; 3, as stabilizers of fatty ingredients or to lengthen the practical life of perborates and other bleaches; 4. as essential ingredients in detergents for radioactive decontamin-

"The Sequestration of Metals," Theoretical Considerations and Practical Applications, by Robert L. Smith, The Macmillan Co. New York, 1950, cloth bound, 10 by 614 inches, price \$8.50.

Soap Bubble Classic

Among the first five titles to be published in the new Science Study Series by Anchor Books is "Soap Bubbles, and the Forces which Mould Them," by G. V. Boys. Three lectures that Sir Charles Vernon Boys delivered before a juvenile audience at the London Institution on Dec. 30, 1889 and on Jan. 1 and 3, 1890, compose the book. The Society for Promoting Christian Knowledge, of London, long a sponsor of science books for youngsters, pub-

lished Soap Bubbles as a book in 1902 and a revised edition in 1916, which has long been out of print.

It is astonishing that after the intervening decades of rapid change this book remains valid. It is good science and describes experiments which anyone can do. Ready made soap bubble solutions can take the place of those described by the author. The style and the manner of presentation are not only very easy to understand, but most gracious and engaging.

"Soap Bubbles and The Forces Which Mould Them" by C. V. Boys, published by Doubleday Anchor Books, Doubleday & Co., Garden City, N. Y., Sept. 10, 1959, paper bound, price 95

Gas Chromatography Book

A revised edition of its "Gas Chromatography Applications Manual" has just been published by the scientific and process instruments division of Beckman Instruments, Inc., Fullerton, Calif. The 71-page book covers the basic theory of gas chromatography, correct instrument design, column technology and applications. One entire section is devoted to industrial gas chromatography, i.e. the application of chromatographic analysis to continuous process gas or liquid streams. The laboratory applications section gives procedures and computations in detail. More than 50 illustrations and 500 references are included.

Intended for practical daily use in the plant and laboratory, the book may be purchased at \$5.00 a copy. One copy is supplied free with each Beckman laboratory and industrial gas chromatograph.

Pesticide Handbook 1959

The 11th edition of Pesticide Handbook, compiled and edited by Donald E. H. Frear has just become available. Dr. Frear is Professor of Agricultural and Biological Chemistry at Pennsylvania State University. The 1959

edition lists more than 7,000 insecticides, fungicides, herbicides, rodenticides, and other agricultural chemicals and equipment. This represents a 14 per cent increase over the items listed last year. Name, active ingredients, and manufacturer are given for each product.

Information on current legal tolerances is included as well as on uses, compatibilities, hazards and antidotes of pesticides.

The 250-page book is published by College Science Publishers, State College, Pa., the price is \$1.75 a copy, paper bound, and \$3.25 per copy, cloth bound.

New NPCA Booklet

A paper titled "The Sanitation Aspects of Food Contamination by Birds" by Kenton L. Harris of the Food and Drug Administration. United States Department of Health, Education and Welfare, is being distributed in booklet form by the National Pest Control Association, 250 West Jersey St., Elizabeth, N. J. The paper eventually will become a chapter in the NPCA Manual on Bird Control being prepared by its Bird Management committee. In his article, Mr. Harris points out the importance of birds, especially pigeons, starlings, and sparrows, as contamination sources. Increased attention is being paid to bird control by government agencies, he notes, in sanitary inspections of foodstuff storage. Copies of the paper may be obtained from the association.

Polyglycol Bulletin

The third edition of a bulletin entitled "Choosing the Right Polyglycol" has just been published by Dow Chemical Co., Midland, Mich. The 24 page publication lists 40 polyglycols and gives descriptive and use information for each of them. Automotive specialties and detergent formulations are among the numerous chemical specialties products where polyglycols serve either as basic materials or additives.

Data from the SILICOMES MAN

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NEW Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication. Complete copies may be obtained by writing to the publisher of this magazine: — MacNair-Dorland Co., 254 W. 31st Street, New York 1, N. Y., and remitting 50c for each copy desired. For orders received from outside of the United States the cost will be \$1.00 per copy.

No. 2,897,155. Process for Preparing a Detergent Composition Containing Anhydrous Form II Tripolyphosphate, patented by John P. McNaught, Waldwick, and Jack R. B.yant, Tenafly, N. J., assignors to Lever Brothers Co., New York. The patent teaches a process of preparing a free flowing heat dried detergent composition containing from about 25% to about 40% of primarily anhydrous Form II sodium tripolyphosphate and a minimum of decomposition products thereof comprising adding last any anhydrous Form II sodium tripolyphosphate to an aqueous slurry of the detergent composition containing an organic detergent of the group consisting of watersoluble alkali metal soaps and watersoluble non-soap synthetic detergents plus water-soluble inorganic builder salts to form a slurry having only sufficient moisture to maintain a pumpable and sprayable slurry, the slurry having a temperature in the range of from about 160°F, to about 200° F.; agitating the slurry within said temperature range for a period not more than about one hour; and then heat drying the slurry.

No. 2,888,789. Method of Filling Volatile Propellant on Warm Products, patented by Albert B. Mojonnier, Chicago, assignor to Kartridg-Pak Machine Co., Chicago. This patent teaches a method of packaging a volatile propellant and a product which is liquid at ambient temperature and at least semi-solid at the boiling point of the propellant under atmospheric pressure comprising introducing a measured quantity of liquid product at substantially ambient temperature into an open container a quantity of liquefied propellant subcooled to a temperature substantially below the boiling point thereof at atmospheric pressure on top of the warm product therein, flowing at least the initial portion of said propellant gently on top of the warm product in the container with a low velocity insufficient to cause the propellant to penetrate an appreciable distance into the warm product whereby to spread

the propellant smoothly over the surface of the warm product to chill and at least partially solidify only the surface of the warm product, and thereafter closing the container.

No. 2,896,853. Packaged Insect Repellent, patented by Frank J. Currar, Downers Grove, Ill. Claimed is a packaged insect repellent comprising a block of vaporizable material including an encasing skin of tearable air-impervious material wrapped thereabout and sealing the same and a disposable packaging box of semirigid material like paperboard formed with a plurality of window-like openings at spaced points thereabout, said box defining a chamber for housing said block with portions of said block projecting through said openings for selective exposure to the atmosphere upon removal of the portions of said skin overlying the same.

No. 2, 894, 877. Wide Range Aerosol Sampler, patented by Frank W. Sinden, Stirling, N. J. The invention consists of an aerosol sampler comprising a casing, having top and bottom openings, a perforated plate positioned transversely of said casing, said plate having small radial openings positioned at spaced distances from the center of said plate, a nutrient covered plate positioned beneath said perforated plate and adapted to be rotated with respect to said perforated plate and means for exhausting an aerosol into the top opening of said sampler through said perforated plate and onto said nutrient medium and out through the bottom opening of said casing.

No. 2,892,795. Paste Scouring Cleanser, patented by Philip Benjamin Dalton, Franklin Square, N. Y., assignor to Colgate-Palmolive Co., Jersey City, N. J. Claimed is a paste scouring cleanser consisting essentially of about 50% to 73% of silex, 2% to 10% of an alkyl benzene sulfonate having an alkyl chain from 8 to 18 carbon atoms, about 4% to 10% of sodium tripolyphosphate, about 0.6% to 2.5% of a high titer soap having a titer of about 25° to 60° C., about 15% to 30% of glycerin, and about 15% to 30% of glycerin, the foregoing percentages being by weight.

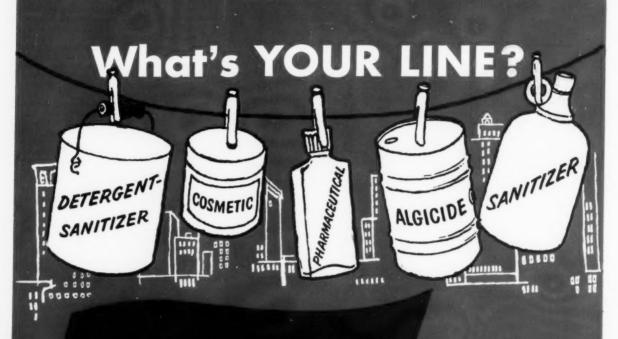
No. 2, 889,078. Dispensing Container for Pressure-Propellant Products, patented by Ralph Henry Thomas, Rahway, N. J. The invention consists of a dispensing container wherein a self-contained gaseous propellant is isolated during long storage and use from contact with product to be dispensed, comprising a rigid outer casing, a recessed bottom member sealed to said casing and adapted to permit said casing to stand upright on a flat, horizontal surface, a top closure on said casing, an outlet in said top closure for discharge of

material to be dispensed from said container, a valve closing said discharge outlet, a plastic coated metallic foil non-resilient diaphragm sealed to said casing and forming an upper chamber communicating with said valve, said upper chamber containing a product to be dispensed through said valve, and said diaphragm forming with said bottom member a sealed lower chamber containing gaseous propellant, said metallic foil rendering said diaphragm impervious to said gaseous propellant, said diaphragm transmitting the pressure of said gaseous propellant from said sealed lower chamber to said product in said upper chamber and deforming so as to shrink the volume of said valved chamber as said product is dispensed through said valve, while preventing contact of said product with said propellant gas during storage and use.

No. 2,897,112. Pest Combating Compositions, patented by Arthur Douglas Harford, Sunbury-on-Thames, and Herbert Ward Vernon, London, England. This invention describes an improved pest combating composition, suitable for combating houseflies, consisting essentially of a pyrethrin, diphenylmethane and acetophenone in a hydrocarbon distillate fraction, the total amount of pyrethrin being 0.02-0.6% by weight of said composition, the ratio of the weight of acetophenone to pyrethrin lying in the range 5:1 to 15:1 ard the ratio of the weight of diphenylmethane to pyrethrin lying in the range 5:1 to 15:11.

No. 2,892,821. Detergent Copolymers, patented by William T. Stewart, El Cerrito; Frank A. Stuart, Orinda, and Warren Lowe, Berkeley, Calif., assignors to California Research Corp., San Francisco. This patent covers a copolymer of monomers selected from each of the classes consisting of (A) dodecyl acrylate, (B) N-2-ethylhexyl methacrylamide, and (C) acrylic acid, said components being present in the copolymer in the ratio of from about 1 to 20 monomer units of the A component for each monomer unit of said B and C components, there being present at least one monomer unit of each of said B and C components in the copolymer, said copolymer having an apparent molecular weight of at least 2,000 and a solubility in oil of at least 2% by weight.

No. 2, 897,156. Manufacture of Alkyl Benzene Sulfonate Detergents, patented by Allen H. Lewis, Berkeley, assignor to California Research Corp., San Francisco. In the process of manufacturing alkyl aryl sulfonate detergents by sulfonating C. to C. monoalkyl benzenes, adding water to the sulfonation reaction product mixture, settling the resulting mixture to separate a sulfonic acid phase and a sulfuric acid phase, and neutralizing the sulfonic acid phase with sodium hydroxide, this patent teaches a method of substantially reducing the time required to effect said phase separation which comprises adding to said alkyl benzeres from at least 5 to 10% by weight, based thereon, of an aromatic hydrocarbon material from the group consisting of benzene and toluene prior to said sulfonation.



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WRITE, PHONE, WIRE

SOAP PLANT Observer

By Willis J. Beach

HE "Soap Plant Observer" column has been in existence now for about twelve years. When this writer introduced the first column in 1947. World War II was still fresh in our minds, controls had been lifted and materials were in short supply. The retail market was beginning to feel the impact of a variety of household cleaners based on synthetic detergents-many of the products poorly formulated and ill conceived. But inroads into the use of conventional soap were in the making and the trend still continues today.

New insecticides and repellents fresh from military use were being formulated for the civilian trade. The aerosol can evolved from the "bug bomb," The cattionic quaternary compounds were beginning to hit the market in a variety of sanitizing and disinfecting agents, and the limitations of the phenol coefficient concept and test were first being realized.

One result of this flurry of activity in pest control and sanitary chemicals has been a greatly expanding chemical specialties industry-one that has grown in technical complexity as well as in size. But the same cannot be said for the soap industry in its more inclusive definition-the making and marketing of conventional soap-although several new processes for producing soap on a continuous basis have been developed. Many of the old-time small soapers have left the scene or merged with some of the more aggressive, larger firms. However, soap is still being made by small concerns and for a variety of purposes. One aid to the small operator today is the wide variety of soap making building blocks of high quality fatty acids at his disposal.



The variety and quality of fatty acids now on the market of course results from post war improvements in hydrolysis and refining techniques. They offer the chemical specialty manufacturer economies in capital outlay and in processing, and a flexibility in finished product that is difficult to attain with conventional soap boiling in the kettle.

With the increased use of latty acids there naturally arise many questions on their handling

during storage and processing. Some of the best information on this subject will be found in bulletins issued by the fatty acid suppliers. The booklet, "How to Handle Fatty Acids," issued by the Fatty Acid Division, Association of American Soap and Glycerine Producers, Inc., 295 Madison Ave., New York, is particularly useful, Without trying to cover the subject in detail, we would like to offer in this column a few of the more important points to consider.

Providing normal precautions of cool, dry storage are taken, bagged and drummed stocks offer no problems. Drums should not be allowed to stand open, and holding of partially filled drums should be avoided. When consumption reaches a point where the economies of tank car or tank truck deliveries can be realized, bulk storage facilities are needed and tanks of 3-S aluminum or type 304 stainless steel or stainless clad must be installed. Most fatty acids of good quality will store well in aluminum if temperatures are not over 150°F and the acids are reasonably dry. To prevent local over-heating and color degradation, outside heating coils of seamless copper tubing may be wrapped along the exterior surface of storage tanks. External coils are usually spaced between the supports of vertical tanks and along the bottom onethird of the circumference of horizontal tanks. The heating should be well insulated, and it is desirable to use plant steam at low pressure (15 or 20 psig). Automatic temperature control is desirable and should be set to maintain the minimum temperature needed to keep the acids liquid.

For fatty acid transfer lines, aluminum tubing will normally do, and again where there is any chance of solidification the lines should be traced with low pressure steam, well trapped and insulated. It is desirable to use stainless steel, however for valves and pumps and in short lines in processing areas where temperatures and pressures may be high.

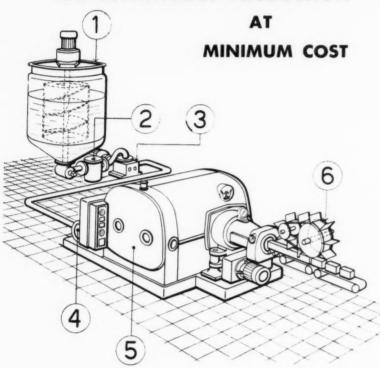
About the Author . . .

A LTHOUGH Mr. Beach conserver" column in its early days while he was a member of the editorial staff of Soap & Chemical Specialties. John W. McCutcheon wrote the column for the past 10 years. His last column appeared in the February issue, when he decided he would rather not have to meet a deadline every month.

Mr. Beach spent a year and a hall with Soap & Chemical Specialties when he came out of the Navy following World War II. Presently he is a chemist in the technical service department of Sugar Beet Products Co.. Saginaw. Mich., hand soap makers. Earlier, Mr. Beach had been with P&G and the soap making department of Hershey Chocolate Co. He designed and purchased the equipment for a navy soap plant on Guam during the war.

7he New SAIX COOLING PLODDER

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The savings in floor space, labor and production time effected by the SAIX COOLING PLODDER are really impressive. The drawing illustrates the mechanical simplicity of this latest equipment for continuous soap cooling.

(1) The hot liquid soap is drawn from the storage tank through filters (2), (3) and (4), into cooling plodder (5). Here it passes into an annular chamber between a cylinder rotating within a hollow fixed cylinder, both of which are water-cooled. The cooled soap is then compressed by rotating pistons in the collecting chamber. The semi-solid plastic soap then passes to the milling unit and thence to the compression cone, from which it is finally extruded as a continuous bar. It is cut into desired sizes by the continuous automatic cutting machine (6).

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J.M. LEHMANN COMPANY, Inc.

550 NEW YORK AVENUE, LYNDHURST, N. J.

The use of Schedule 5 stainless pipe and fittings offers economies. In certain circumstances use is made of stainless steel tubing. Connections are best made by welding or flanging. Threaded joints are satisfactory for moderate temperatures and pressures but considerable trouble may be experienced at first in getting leak-proof seals. The literature contains very few references to making threaded connections leak-proof or the means to overcome leaking so we will offer a few suggestions.

One of the main difficulties with threaded connections on stainless steel pipe is galling-the tendency of the metal to rub off, pit, bunch up and deform slightly when under stress. This creates grooves and channels in the threaded joints allowing the liquid fatty acid under pressure to get through and leak. Conventional pipe dopes are of little value for sealing in fatty acids. A thread sealant we have found helpful with fatty acids is known as "Ribbon Dope," which is essentially a roll of "Teflon"* plastic which is simply wrapped tightly around the thread, with a slight overlap before the connection is made. The sealant is manufactured by Permacel, New Brunswick, N.J. Another tape of "Teflon," offered as a pipe sealant, is "Scotch" brand Tape No. 547 of Minnesota Mining and Manufacturing Co., St. Paul, Minn. Joints sealed with "Teflon" will handle temperatures from extreme cold to over 500°F, and, of course, are resistant to most corrosive materials. They are easy to disassemble for the plastic is somewhat flexible and self-lubricating.

Another anti-seize compound for stainless steel is a thread lubricant sold as "Silver Goop." This product, by Crawford Fitting Co., 334 E. 140th St., Cleveland, was first brought to our attention during a plant visit by the engineer of one of the large fatty acid producers.

^{*}A registered trade mark of E. I. du Pont de Nemours & Co., Wilmington, Del., for tetrafluoroethylene resins,

Products and PROCESSES

Pyrethrum v. Tobacco Moth

Tobacco moths in warehouses can be successfully controlled by weekly applications of pyrethrum aerosols or mists, according to USDA. Formulation is critical since odor changes or greasy deposits on stored tobacco must be avoided. Only partial control of cigarette beetles may be accomplished by daily application of pyrethrum in aerosol or mist form. Pertinent details may be learned from Marketing Research Report No. 334, entitled "Pyrethrum Mists and Aerosols for Control of Insects in Tobacco Warehouses." Copies are available from the Office of Information, U.S. Department of Agriculture, Washington 25.

Floor Polish Copolymer

An acrylic copolymer emulsion, "9431 Synthemul," for use in floor polishes, is described in a technical bulletin just published by Reichhold Chemicals, Inc., White Plains, N.Y. Easy removability, good freeze thaw stability, gloss, leveling, and hardness are claimed for the product. Physical specifications and use information are included in the data.

New Fluorinating Agent

Availability of sulfur tetrafluoride in development quantities was announced last month by the Dyes and Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del. Unlike other reagents, this newly synthesized reactive gas replaces oxygen with fluorine in many chemical compounds. The advent of this new fluorinating agent is expected to greatly enlarge the range of fluorinated compounds, which might include better insecticides and herbicides, according to du Pont.

The low surface energy characteristics of many fluorinated compounds suggests use of sulfur tetrafluoride in manufacture of surface active agents, water and oil repellents, and lubricants. Other specialties applications are envisaged.

The new chemistry of sulfur tetrafluoride, the existence of which has been doubted until very recently, is credited by du Pont to three research chemists: Earl L. Muetterties, William Channing Smith, and Charles W. Tullock.

New Monsanto Phosphate

A new, reportedly lowturbidity tetrapotassium pyrophosphate has just become available in commercial quantities from the inorganic chemicals division of Monsanto Chemical Co., St. Louis 66, Mo. This material, according to Monsanto, permits the manufacture of clear, cloudless liquid

Special Cleaner Formulas

Glycol ethers in specialty formulations serve to couple water to dry-cleaning soaps and grease solvents to wetting agents. Miscible with many organic solvents they are also effective surfactants detergents. The finished product will contain a minimum of potassium tripolyphosphate and other trace impurities which cause cloudiness in general purpose liquids, Monsanto claims.

New Hair Spray Resin

A technical service bulletin suggesting hair spray formulations based on a new resin copolymer has just been issued by National Starch and Chemical Corp., 750 Third Avenue, New York 17.

"Resyn 28-1310" is a polyvinyl acetate copolymer marketed in the form of fine transparent beads. Neutralization of the copolymer with 2-amino-2-methyl-1, 3- propanediol (AMPD) yields resins said to be particularly suitable for hair spray formulation. Solubility, flexibility and tackiness of the film can be modified by varying the degree of neutralization. Suggested amount of AMPD for

(Turn to Page 198)

in oil and grease removers and glass cleaners. A booklet on "Cellosolve" and "Carbitol" glycol ethers just issued by Union Carbide Chemicals Corp., 30 East 42nd Street, New York 17, includes the following suggested formulations:

Glass Cleaner

	Parts by volume
Isopropanol (99%)	35.00
"Carbitol" solvent	7.50
"Tergitol" anionic 7 Carbide	0.25
Water	57.25
Mix isopropanol. "Carbitol" and water, then add "Tergitol	" anionic 7.

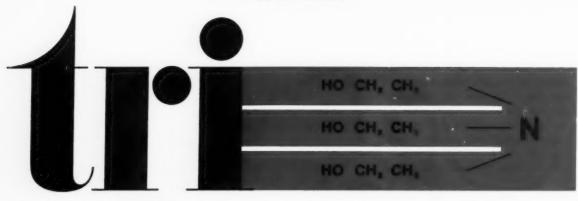
Amine dry cleaning soaps.

	No. 1	No. 2
	oleic acid	saponified
	80%	90%
	parts by	weight
Cleaners naphtha	25.0	25.0
Butyl "Cellosolve"	27.0	27.0
Oleic acid	107	107.0
Triethanolamine	21.0	~
Monoethanolamine		10.5
Potassium hydroxide (100° basis)	8.3	9.5
Water	13.5	13.5

Warning: do not use an open flame

- I. Heat naphtha, Butyl "Cellosolve," and oleic acid to 140°F.;
- In separate container dissolve potassium hydroxide in the water and add amine.
- 3. Stir the resulting hot water solution (2) into the fatty solution (1);
- 4 Continue to stir for about 30 minutes to react all of the potassium hydroxide; solution should be clear.

IF YOU USE



HO CH, CH,
NH
NO CH, CH,

DON'T OVERLOOK

HO CH, CH, —NH₂

It won't hold for everybody, but in some applications where di- or triethanolamine is being used, there are positive advantages to be gained from switching to mono-. For example, MEA can frequently be used advantageously as the amine in amine soap emulsifiers for such products as cutting oils, weedicides, waxes and buffing compounds. In some instances total amine required is reduced to the extent that cost is

reduced. In some cases mixtures of MEA and TEA are better than either alone.

MEA may improve performance while TEA maintains a lower pH.

If your product or process now utilizes DEA or TEA, it may pay you to evaluate MEA. Allied makes all three, and will give you technical suggestions that may help you reduce costs, improve efficiency or make a better product. Write for any technical assistance you need.

For specifications and local offices, see our insert in Chemical Materials Catalog, pages 435-442 and in Chemical Week Buyers Guide, pages 35-42.

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2017

SOAP and CHEMICAL SPECIALTIES

New Colton-Hope Coder

A new machine which makes a non-transferable embossed code on the bottoms of open-mouth metal containers was introduced recently by Arthur Colton Co., 3400 E. Lafayette, Detroit 7. Designated Type 22, the coder can handle containers from half pint to gallon capacities at speeds of from 15 to 35 per minute. The machine can be added to existing production lines or it may be built as a part of a Colton-Hope filling machine. Movable from one line to another, the Type 22 bottom coder features a variable speed drive, self aligning ball bearings, cross conveyor chain. and timing screws. Coding dies accommodate two rows of six letters or digits each.

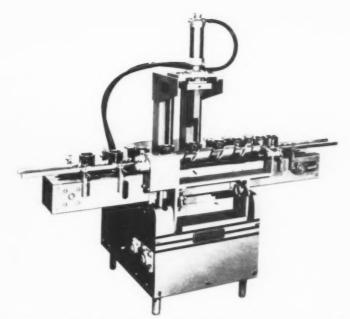
The company also announced the construction of a new plant at Elk Rapids, Mich., for the manufacture of punches and dies for its rotary tablet presses. According to Kenneth B. Hollidge, executive vice-president, who made the announcement, the firm's expansion is the result of the recent acquisition of Hope Machine Co. and a manufacturing arrangement with Alpha Engineering Works to make acrosol filling equipment. New business resulting from these developments has overloaded its two Detroit plants and another in Mancelona, Mich., the company Savs.

Bareco Lists Waxes

Bareco Wax Co., division of Petrolite Corp., P. O. Box 2009, Tulsa 1, Okla., recently sent out ink blotters on which are listed its complete line of microcrystalline waxes. The listing classifies the waxes by their more common uses and includes some of their specifications.

Caustic Potash Booklet

A 60-page booklet on the properties and handling of caustic potash has just become available from Solvay Process Division of Allied Chemical Corp., 61 Broadway, New York 6. Covered are



New Colton unit for marking non-transferable embossed code on bottoms of open mouth metal containers. Handles containers of from 1/2 pint to gallon size.

physical and chemical properties of caustic potash and its aqueous solutions; safety precautions and methods of unloading and handling drums and tank cars; and three methods for dissolving solid potash.

One chapter is devoted to general information and conversion tables. A wall chart showing "Precautions in Handling Caustic Potash" is included as a fold-out page in the back of the booklet.

New Retracting Drum Tap

A retracting drum tap said to provide drip-free operation was introduced recently by Hadco Corp., 2705 Detroit Ave., Cleveland 13, O. The tap is available in two models, one for installation into the head by the drum manufacturer and the other which is threaded for installation in stand-



ard 34 inch pipe-size drum openings by the processor. Designed for use with liquids such as soaps, waxes, disinfectants, chemicals, and paint products, the tap is opened by a slight turn and pulling. Shutoff is accomplished by pushing the tap back into the drum and turning clockwise to a locked position. In the "off" position, the unit is flush with the drum head.

Both style taps are made of heavy-gauge steel and are treated with a corrosion-resistant finish. They are available as standard for all 15, 30, and 55 gallon drums and special taps can be furnished for smaller size containers, the company states.

Fatty Alcohol Use Data

Product and use information pertaining to the "Laurex" series of eight fatty alcohols has just been issued by Marchon Products Ltd., Whitchaven, Gumberland, England, in the form of a four page folder. These alcohols are mainly used as intermediates in the manufacture of surface active agents which in turn are used as bases of household, personal and industrial detergents. Included among other applications are pesticides and cosmetics.

There's something different about



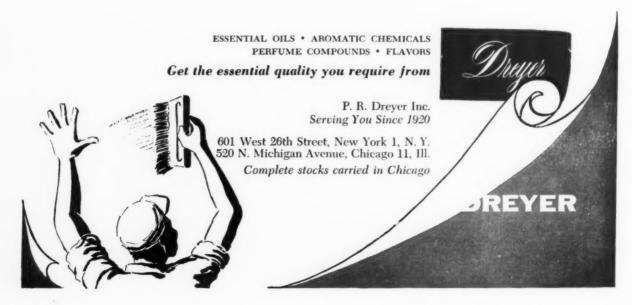
They call us old hands at this business. A good many years of "depending on Dreyer" have built our background of helping you.

We have never grown old, however. Here at Dreyer, we think young.

Today there's new drive at Dreyer. We are a vigorous, modern organization with young, look-forward ideas. Up-to-date thinking here . . . thinking ahead . . . is pulling double harness with experience. The team's working hard and well.

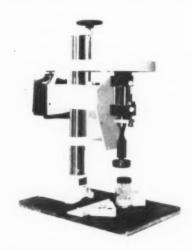
So depend on Dreyer more than ever.

We can help you and save you money.



New Screw Capper

A new type air operated screw capper for all sizes of lug and screw caps, molded or metallic, on



glass, tin, or plastic containers, was introduced recently by Scientific Filter Co., 57 Rose St., New York 38. Designated model "GFV," the capper features an adjustable friction clutch for uniform cap tightening which provides the desired closing torque. Changeable chucks are also featured which allow for quick change-overs from one size or type cap to another. A movable guide on the machine supports and centers the container while it is being capped.

In operation an attendant places the cap loosely on the container and inserts it in the guide. Then he steps on a foot valve which causes the air operated and motor driven capping head to descend and tighten the cap to a predetermined tension. According to Scientific Filter, the machine may be operated to cap 50 containers per minute.

Carbide Glycol Ethers Data

Properties and uses, actual and potential, of 11 "Cellosolve" and "Carbitol" glycol ether solvents are described in a new 40 page booklet released last month by Union Carbide Chemicals Corp., 30 East 42nd Street, New York 17. Glycol ethers are miscible with most liquids, and are mild odored solvents for oils,

waxes, fats, dyestuffs, resins, etc. As mutual solvents for oils, soaps, and water they find use in the formulation of concentrated liquid detergents. They serve as mutual solvents and coupling agents in metal cleaning compounds, specialty cleaners, "soluble" oils, and other soap-hydrocarbon systems. Glycol ethers are used as solvents for insecticides and herbicides and as diluents for hydraulic brake fluids.

Glass cleaning compounds, detergents, stain removers, and dry cleaning soaps are some of the chemical specialties which may incorporate glycol ethers in their formulations.

Florasynth Catalog

A new 36-page price list and catalog has just been published by Florasynth Laboratories, Inc., 900 Van Nest Avenue, New York 62. Perfume oils, synthetic perfume materials, and specialties are grouped according to use. Bouquets for solid and liquid soaps. shampoo perfumes, and fragrances especially formulated for other specialties as well as cover odors for varnishes, waxes, etc., are included. Florasynth offers a line of 10 different bouquets for aerosol formulations. For many of the bouquets, use concentrations in certain products are shown.

"Carbopol" in Silver Polish

The August issue of "Carbopol" Capsules published by B. F. Goodrich Chemical Co., 3135 Euclid Avenue, Cleveland 15, reports a case history illustrating the ability of these hydrophilic polymers to meet emulsion separation problems. "Reed & Barton Silver Polish" according to this report presented such a problem. Thaver Co., manufacturer of the product, succeeded in preventing the emulsion from breaking but at the same time the spreading properties of the polish were impaired. "Carbopol 934" reportedly prevented separation without undue thickening of the product.

New Colton Timing Screw

A new timing screw said to feed accurately round, oval, square, or rectangular glass bottles, metal cans, or plastic containers on a variety of packaging machines was introduced recently by Arthur Colton Co., 3400 E. Lafavette, Detroit 7. Called the "Kinsley Timing Screw," the device is designed to pick up containers from a conveyor at random, move them under controlled acceleration and speed, and discharge each container at the required spacing for the packaging operation. Each screw is generated to fit a specific container or range of container diameters and new timing screws can be generated to fit newly designed container shapes or sizes. The screw may be utilized in such packaging machinery as fillers, cappers, labelers, etc.

New Spray Nozzles

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A new line of nozzles made of hard rubber for spraying corrosive liquids was introduced recently by Spraying Systems Co., 3217 Randolph St., Bellwood, Ill. The nozzles produce an atomized cone spray accomplished by hydraulic pressure alone. Nozzles are available in capacities ranging from one to 26 gals, per hour based on operation at 40 psi. The nozzles are designated as "Spraying Systems 14-NR Atomizing Nozzles" and complete information on them is available in data sheet 8255.





"I need help-from someone who's been in fatty acids from the beginning!"

To the fatty acid user, the experience of his supplier in the servicing of customers, and in the manufac-ture and marketing of fatty acids, can mean the difference between a top-notch product and an also-ran.

Consistent high quality of an end product such as a soap or a cosmetic starts with the vegetable oil, tallow or other crude raw material from which the fatty acid is made. A supplier must know his raw material market thoroughly — what to buy, where to buy, when to buy—because he is purchasing natural materials that vary with environmental fac-tors. Long experience here is an invaluable asset in purchasing for maximum uniformity and quality of the ultimate fatty acid, and so of the final end product.

Given the best raw materials, the fatty acid supplier must then analyze them to determine his procedures for optimum production results. Analytical tests alone are not enough. Experience is necessary to evaluate and interpret the tests, to correct for deviations in even the best raw materials. Only by anticipating and recognizing irregularities can steps be taken for their elimination.

Following tests and evaluations, the fatty acid supplier must know how to process his raw materials for the most uniform results. An experienced producer has facilities flexible enough to handle the variations inherent in his raw materials, and still turn out products which adhere to exacting specifications—batch after batch, shipment after shipment. This uni-formity assures the fatty acid user that he will get maximum performance in his own manufacture.

An intimate acquaintance with all his markets is essential if a supplier is to provide fatty acids which give best results in any particular end product. An experienced supplier has a standard product line that has actually been tailored to the needs of users over many years. And he sees to it that these products are improved constantly to meet new needs

Finally, the supplier must know what to do in emergency situations arising in his customer's plant. Only long years of dealing with every conceivable type of customer problem can give him that knowledge.

A. Gross & Company has been making fatty acids since they were intro-duced — has encountered every type of customer requirement, has assisted in solving an enormous variety of customer problems, has a long-estab-lished knowledge of what to buy and sell to give best results in customer end products.

we would be pleased to discuss your fatty acid requirements with you. For information on A. Gross fatty acids, such as Groco Heat-Stable Red Oils & White Oleines, send for the brochure "Fatty Acids in Modern

Industry.'



295 Madison Ave., New York 17, N. Y. Factory: Newark, N. J. Distributors in principal cities Manufacturers since 1837

Evaluate fatty acids made by A. GROSS-send for samples of: STEARIC ACIDS . RED OILS . WHITE OLEINES . TALLOW FATTY ACIDS . COCONUT FATTY ACIDS . VEGETABLE FATTY ACIDS . HYDROGENATED FATTY ACIDS . HYDROGENATED GLYCERIDES





News...

PEOPLE · PRODUCTS · PLANTS

P&G Earnings Record

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Mennen Realigns Brands

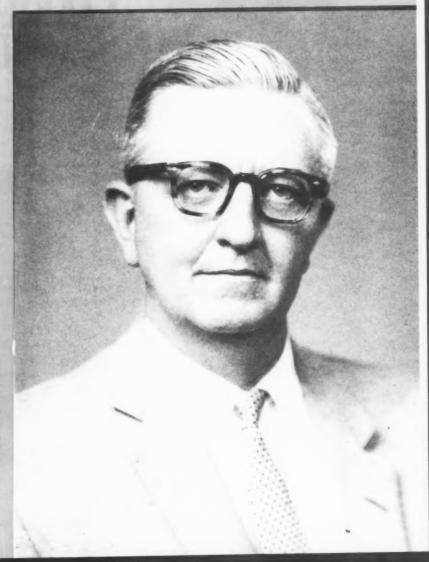
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Reddish Leaves Lambert

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Fels Officers Retiring

Charles H. Bronson, just named industrial products manager of Lever Brothers Co., New York, is now responsible for all product lines of the division. These include industrial soaps and detergents, hotel soaps, glycerine, fatty acids, edible oils and fats. He had been industrial chemical products sales manager, and joined Lever Brothers Company in 1956.





Stronger bubbles are long a tasting but of and Pilot HD-90 gives thicker wall bubbles. Its formulators this means has four stabilities seeded to the job, and a significant product cost saving.

Pilot builds in the high and self stabilizing character with the singular "old processing" technique—eliminated are undesirable and reactions, and rearrangement of molecular structure. Thus, dry flowing, dust-free HD-90 is color-less and odorless. You'll save, on dyeing and perfuming.

Because of its processing, HD-90 is purer: 90% minimum active, Akyl Aryl Sulfonate, which does a kind of cleaning on many hard surfaces that no other material can do at any concentration! That's maximum quality level!

Write for information on the *flexibility of formulating* with Pilot HD-90.



PILOT California Co.

215 WEST 7th STREET . LOS ANGELES 14, CALIFORNIA

Lever Advances Two

Charles H. Bronson has been named industrial products manager and Eugene F. McCarthy has



Eugene F. McCarthy

been appointed sales manager in the industrial division of Lever Brothers Co., New York, it was announced recently by John L. Parry, division general manager. In his new post Mr. Bronson is responsible for all product lines of the division including industrial soaps and detergents, hotel soaps, glycerine and fatty acids, and edible oils and fats. Mr. McCarthy is responsible for all field selling activities.

Most recently industrial chemical products sales manager, Mr. Bronson joined Lever in 1956 as industrial development manager. Mr. McCarthy was assistant sales manager for the foods division prior to his new appointment. He joined the division in 1950 as private brands manager.

Fels Officers to Retire

Edward B. Coyle, vice-president, and Harold G. Pile, secretary of Fels & Co., Philadelphia, will retire officially Oct. 1. Mr. Coyle joined the company in 1908 and worked in the purchasing department. He was elected a director in 1943 and became vice-president in 1950. During his career at Fels, Mr. Coyle was in charge of its sub-

sidiary oxygen plant, Paschall Oxygen Co., until it was sold in 1949. He was also involved in factory production developments. Mr. Coyle was active in the development of "Fels-Naptha Soap Chips" in 1936 and "Instant Fels-Naptha" in 1953.

With the firm since 1903, when he joined the traffic department, Mr. Pile transferred to purchasing in 1911. He has been in that department up until his retirement. Besides his position as secretary, Mr. Pile also is a director.

*

P&G Record Sales

Sales and earnings of Procter & Gamble Co., Cincinnati, for the fiscal year ended June 30th were the highest in the company's 122-year history. Consolidated net sales of the company and its subsidiaries totaled \$1,368,532,426, compared with \$1,295,163,269 last year. Consolidated net earnings for 1958-59 increased 11.6 per cent to \$81,697,965, which were equal to \$3.96 per common share. Comparable figures for the previous year were \$73,196,618, or \$3.56 per share.

Don Fisher was recently appointed sales promotion representative for Davies-Young Soap Co., Dayton. O. He is in charge of promotion for the company's line of "Buckeye" products through distributors in parts of Missouri, Iowa, Kansas, and Nebraska.



Velsicol Advances Lorant

Bernard H. Lorant, recently appointed assistant to the president of Velsicol Chemical Corp., Chi-



Bernard H. Lorant

cago, was assigned full responsibility last month for the company's over-all research and development activities. He also continues in charge of legal and patent functions. With Velsicol since 1946, Mr. Lorant was named assistant to the president last April.

Pyrethrum Price Increase

U. S. refiners of pyrethrum were notified Aug. 21 of 3.73% increase in the price of pyrethrins by representatives of growers in Kenya and the Belgian Congo. As a result prices of insecticide bases formulated with pyrethrum have been advanced by refiners. One refiner expressed "surprize" that the price increase by the growers had been made so early in the year, since last year the price advance was not announced till December. The new price of the so-called 100 per cent material is \$55, up from \$53.

Under the new price scale, one prominent refiner was quoting the following prices for a #20 concentrate in 55 gallon drums: one to four drums, \$9.80 a gallon; five to 49 drums, \$9.70 a gallon and 50 drums and over, \$9.60. These prices are 35 cents a gallon higher than the previous quotations.

Chesebrough Names Two

Appointment of Frank H. Orr to the newly created post of executive assistant to Andrew A.



Robert P. Neuffer

Lynn, domestic marketing vicepresident, at Chesebrough-Pond's, Inc., New York, was announced last month by Mr. Lynn. Previously general sales manager, Mr. Orr is succeeded by Robert P. Neuffer.

In his new post Mr. Orr assists Mr. Lynn, who is also president of Chesebrough's subsidiary, Prince Matchabelli, Inc., in coordinating the many additional activities of the company's domestic marketing organization brought about by the development

of new products and acquisitions.

Mr. Neuffer has been with the firm since early in 1958 and previously had been with Gillette Safety Razor Co., Boston. Prior to that he was with Lehn & Fink Products Corp., New York, as sales manager of the Lehn & Fink division.

P&G to Build Warehouse

Plans for construction of a 112,000 square foot warehouse building adjacent to its soap and detergent manufacturing plant in Kansas City, Kans., were announced recently by Procter & Gamble Manufacturing Co., Cincinnati. The building is scheduled for completion and use before the end of this year, according to Robert W. Seitz, plant manager. It will be a single story masonry building with brick and aluminum siding and will have elevated floor and loading docks for rail and truck service.

Revion Names Fread

Sidney Fread was recently appointed vice-president and treasurer of Revlon, Inc., New York. Mr. Fread was formerly vice-president of Joseph E. Seagram & Sons, Inc., New York, and also had been treasurer of International Latex Corp., Dover, Del.

Shulton Names De la Vega

The appointment of Lorenzo De la Vega as advertising manager of the international divi-



Lorenzo De la Vega

sion of Shulton, Inc., New York, was announced last month by David Gregg, Jr., vice-president of the division. Previously Mr. De la Vega was associated with Mc-Cann-Erickson, Inc., and El Mundo & Telemundo in Cuba, and prior to that Publicidad D'Arcy in Mexico, where he was account executive.

Carter Elects Peake VP

The election of Kirby Peake as administrative vice-president for Carter Products, Inc., New York, was announced recently by H. H. Hoyt, president. Mr. Peake recently resigned from Vick Chemical Co., New York, with whom he was associated for the past 21 years. He was president of its Vick Products division since 1947.

Favor Savings Stamp Plan

Support was gathered from various quarters recently in favor of the plan of Own-A-Bit-of-America Corp., to offer U. S. savings stamps in exchange for coupons from various consumer products. Gordon C. Bowen, president of the Premium Advertising Association of America, Inc., New York, hailed the program as a "premium of unprecedented value . . . and as an important anti-inflation measure." Others who have spoken out in favor of the plan are James F.

After a recent luncheon meeting in New York of CIBS, featured speaker Eugene E. Whitlock, second from left, unit manager for National Broadcasting Co., chats with CIBS officers, left to right. William Jaeger, Park and Tilford, director; John Duncan, Hazel-Atlas Glass Co., division of Continental Can Co., president: and Edgar Ellis, Charabot & Co., director. Mr. Whitlock spoke on problems of television production.



Stiles, national director of the savings bond division of the U. S. Treasury Department, and U. S. Representative Carroll D. Kearns of Pennsylvania. The plan, suggested by B. T. Babbitt, Inc., New York, offers savings stamps in exchange for coupons on Babbitt items. It brought strong criticism from U. S. Representative Abraham J. Multer of New York (see Soap and Chemical Specialties, August, 1959, page 154).

T-H Answers FTC Charge

Thompson-Hayward Chemical Co., Kansas City, Mo., last month answered charges made against it earlier by the Federal Trade Commission. In its complaint the FTC stated that the company illegally lessened competition by selling its liquid laundry bleach at 20 cents per gallon at its Dallas, Tex., plant while maintaining a price of 40 to 75 cents per gallon for the product in the Kansas City area (see Soap and Chemical Specialties, August, 1959, p. 21).

In its answer to the FTC complaint, Thompson-Hayward explained that the bleach manufactured and marketed in the Kansas City area was superior to that made and sold in the Dallas area. The company further contended that price differences between the products sold in the two areas "make only due allowance for differences in the cost of manufacture, sale, and delivery." Other factors cited in Thompson-Hayward's answer were the seasonal demand for chlorine in the Dallas area, the fact that sales in the Dallas area are not in interstate commerce, and the competitive nature of the market for the product in that area. The company requested that the complaint be dismissed.

Diversey Earnings Rise

Net income of Diversey Corp., Chicago, for the first half of this year was \$260,792, or 99 cents per share, compared with \$170,086, or 65 cents per share, for the first six months of 1958.

Noxzema Names Hunt VP

William D. Hunt was elected vice-president, director of product development, for Noxzema



William D. Hunt

Chemical Co., Baltimore, Md., at a recent meeting of the company's board of directors. With the firm since 1955, Mr. Hunt has been in charge of Noxzema's new product development and acquisition program.

Velsicol Names Two

Two marketing specialists were recently assigned to the "Chlordane" insecticide marketing staff of Velsicol Chemical Corp., Chicago. They are Edward M. O'Leary and Philip M. Olson. Both work in the areas of dealer service and retail sales promotion.

Before joining Velsicol, Mr. O'Leary was a representative for Multi-Clean Co., St. Paul, Minn., in Michigan, Indiana and Kentucky. In his new post he makes

Edward M. O'Leary



his headquarters in Chicago and covers the midwest area.

Mr. Olson was with Southwest Potash Corp., a division of American Metal Climax, Inc., New York, before joining Velsicol. He is now responsible for the eastern area and makes his headquarters in New York.

Velsicol also announced the appointment of Richard Noonan, "Chlordane" marketing specialist, to cover the west coast area. He makes his headquarters in Berkeley, Calif.

Stepan Sales Rise

Sales of Stepan Chemical Co., Chicago, for the first six months of this year totaled \$8,693,658, compared with \$7,322,853 in the corresponding 1958 period. Net earnings were \$472,567, or 76 cents per common share, compared with \$436,833, or 70 cents a share, the previous year. Sales and earnings figures for 1959 include results from the operations of Stepan's recently acquired subsidiary, Maywood Chemical Works, for May and June.

CMCS Moves Office

The Montreal office of the Canadian Manufacturers of Chemical Specialties Association was relocated recently at 3405 Cote des Neiges Road, Montreal 25, Quebec. The new telephone number is WE 5-3547. Previously the office was at 1005 Sherbrooke St., West Montreal 25.

Philip M. Olson



iso-AMYL SALICYLATE by FRITZSCHE

One of a series of premium quality aromatics now in large scale production at our Clifton Plant. By virtue of improved processing techniques and control, these materials are of a grade measurably superior to most of the corresponding aromatics now commercially available. Our iso-AMYL SALICYLATE in particular represents an unusually fine value. Its exceptional purity results in powerful, long-lasting odor of great potential interest to the perfumer and soap maker. Its fragrance lends exquisite beauty to such popular types as: chypre, carnation, trefle, gardenia, orchid, new mown hay and many others. If you would like to sample iso-AMYL SALICYLATE by FRITZSCHE for purposes of comparison, write or phone us your request today.



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Soap and Toiletry Retail Sales Increase

S. sales of toilet soap in 1958 in all retail outlets amounted to \$233,390,000 (up 6.6 per cent) according to a recent survey of toiletries, drugs, and sundries. About \$66,680,000 of this total were accounted for by deodorant soaps, an increase of 16.2 per cent over 1957.

Shampoo purchases totalled \$155,900,000 which represents a 6.3 per cent gain over 1957. Medicated shampoos accounted for \$20,350,000 (up 14.2 per cent); baby shampoos, \$3,010,000; color shampoos, \$4,010,000 (up 13.6 per cent); and all other shampoos, \$128,530,000.

Expenditures for shaving cream totalled \$62,300,000, a 4.5 per cent increase over 1957. Of this total \$12,100,000 was spent on brushless (down 5.5 per cent); \$39,540,000 on aerosol (up 9.8 per cent); and \$10,660,000 on lather shave cream (down 1.3 per cent). Purchases of shaving soaps and sticks dropped 6.4 per cent to \$7,550,000.

Total spending for dentifrices in 1958 is reported at \$230,-390,000 (9.6 per cent more than in 1957) of which \$222,590,000 was for toothpastes.

These statistics were compiled by *Drug Topics* and appeared in the July 27, 1959, issue of *Drug Trade News* (Topics Publishing Co., 155 East 44th Street, New York 17) in its 12th annual survey of consumer expenditures for all items sold in drug stores.

Among the 12 items leading drug store sales of toiletries tooth-pastes are number one, shampoos are seventh. Of all shampoo purchases 26 per cent are transacted in drug stores, which take a 42 per cent slice of shaving cream purchases and a 26 per cent share of the dentifrice purchases. Only eight per cent of all toilet soaps is bought in drug stores.

Turning to a group of products termed home sanitation goods, the survey shows a 4.7 per cent decline in purchases of household disinfectants to \$42,510,000, of which 13 per cent was spent in drug stores.

Total spending for household pesticides rose 8.3 per cent to \$135,910,000, of which 25 per cent was spent in drug stores. Purchases of household pesticides in aerosol form increased by 18.6 per cent to \$52,130,000. In this group moth control agents accounted for \$3,170,000 (up 24.4 per cent); space sprays for \$27,190,000 (up 21.6 per cent); surface sprays for \$15,710,000 (up 11.7 per cent); and all other aerosols for \$6,060,000 (up 21.6 per cent).

More than half the pressure packaged moth control agents purchased were bought in drug stores; 18 per cent of the space sprays and 26 per cent of the surface sprays.

Non-pressurized liquid household pesticides were bought at the rate of \$32,460,000, of which \$17,580,000 were accounted for by space sprays and \$10,940,000 by surface sprays. Drug stores sold 14 per cent of this group of products.

Purchases of household pesticides in paste and solid form totalled 851,320,000. This total breaks down into 821,280,000 for moth control agents: \$12,510,000 for anti-coagulant rodenticides; \$4,500,000 for other rodenticides; \$7,520,000 for roach poisons; and \$2,510,000 for ant poisons. Of these products drug stores sold about one third.

The American public spent \$97,600,000 for floor waxes, \$62,860,000 for furniture and auto polishes. Purchases of household deodorizers amounted to \$51,180,000 (up 9 per cent). In this classification aerosol sales rose 25.3 per cent to \$39,460,000, while sales of other household deodorizers dropped 24.3 per cent to \$11,720,000.

About \$66,470,000 worth of

shoe polishes were bought in 1958. Home dry cleaning fluids accounted for \$10,540,000 and spot cleaning fluids for \$7,470,000 worth of purchases.

Only one per cent of all waxes and car polishes were bought in drug stores; 12 per cent of all household deodorizers and shoe polishes; 10 per cent of the dry cleaning fluids and one hall of all spot cleaning fluids.

New "Surf" Premium

Stainless steel flatware is being packed into each carton of "Surf" powdered detergent as a premium offered by Lever Brothers Co., New York, Regular packages of the product contain a stainless steel teaspoon; the "giant" size has either a dessert spoon, salad fork, dinner fork or dinner knife. Order blanks are provided for consumers to obtain additional pieces of the flatware for 50 cents plus one "Surf" boxtop.

Mennen Advances Cleary

Sylvester Cleary was recently advanced to marketing service manager for Mennen Co., Morristown, N.J. Previously advertising manager, Mr. Cleary is now responsible for the advertising, sales promotion, market research, and product development departments and is a member of the company's marketing committee. Also announced was the appointment of Tom Brady as product development manager.

"Alfol" Plant for Conoco

For the first time high molecular straight chain fatty alcohols will be produced from petroleum on a large scale at a multimillion dollar petrochemical plant to be built at Lake Charles, La., by Continental Oil Co., Houston, Tex. Annual capacity of the plant, claimed to be the first of its type anywhere, will be 50,000,000 pounds of straight chain primary alcohols, according to Harold G. Osborn, Conoco senior vice-president. The unit is scheduled to go



para-perfumes

in a wide range of attractive odors available with and without color.

Carefully adjusted to the evaporation rate of the blocks and crystals



601 west 26th street new york 1, n. y.

into production early in 1961.

At present, petroleum is a basic source of many branched chain alcohols and low molecular weight straight chain alcohols. But the higher molecular weight straight chain alcohols have been dependent on natural sources, such as tallow and coconut oil. Conoco's plant will make alcohols containing even numbers of carbon atoms ranging from six to 18, which will be marketed under the trade name "Alfol." Makers of detergents, emulsifiers, textile chemical specialties, lubricating oil additives, and cosmetics are among the industrial consumers of straight chain alcohols.

Principal raw material for the new alcohols is petroleum derived ethylene. Basic intermediate produced in the process is aluminum, tri-ethyl. The process is based on work done by Karl Ziegler and Conoco is licensed under the Ziegler patents. The work has been carried further by Conoco research men at Ponca City, Okla., over a period of five years.

The bearing of this new development on the detergent industry is outlined in the May 1959 issue of SOAP and Chemical Specialties in an article entitled "New Petrochemical Intermediates for Detergents," by George E. Hinds, director of market development for Conoco's petrochemical division.

Acquire Bon Ami, Canada

Bon Ami of Canada, Toronto, was one of three firms whose control was recently taken over by Arcan Corp., of that city. According to Philip Owen, vice-president and general manager of Arcan, his firm is branching into new fields of materials handling and retail merchandising in Canada and the United States and expects to have a volume at the rate of \$200 million a year before the end of 1959. The Bon Ami label will be added to 14 new products and the Bon Ami plant in Montreal is being converted to handle most of the new lines, Mr. Owen stated.

Yardley Elects Niehouse

Oliver L. Niehouse was elected a director last month of Yardley of London (Canada) Ltd.,



Oliver L. Niehouse

Toronto, and also was named director of sales. In his new post he is responsible for all sales and marketing activities of the subsidiary. With the company since early 1958, he was most recently marketing manager.

Franklin Research Expands

Franklin Research Co., Philadelphia, recently completed a 25,000 square foot addition to its plant on Lancaster Ave. The new construction houses new executive offices and laboratories on three floors in the front of the building. Directly behind the offices and laboratories space are two floors of manufacturing facilities having extra high ceilings. Underground storage tanks with a capacity of

150,000 gallons, two loading docks, and a new continuous flow process have been installed as part of the expansion program. In addition, production equipment has been reengineered.

Franklin Research Co. is now a subsidiary of Purex Corp., Ltd., South Gate, Calif., which acquired the Philadelphia floor wax and chemical specialties manufacturing firm earlier this year.

Babbitt Sales Set Record

Net sales of B. T. Babbitt. Inc., New York, for the first half of this year were the highest for any six months in the company's history. Through June 30 net sales were \$11,094,417, compared with \$9,584,318 in 1958. A net loss of \$68,374 was reported for the first six months of 1959. In 1958 net earnings were \$510,786, or 43 cents per common share. Marshall Lachner, president, noted that the amortization of certain assets acquired early this year from Charles Antell, Inc., and AnDrue Laboratories, as well as promotion expenses for new products, and research and development expenditures, were reflected in the loss.

Summit Chemical Moves

Summit Chemical Corp., recently moved its offices to new and larger quarters at 859 East 43rd Street, Brooklyn 10, N.Y. The company's new telephone number is Gedney 4-7176.

Newly completed addition to Franklin Research plant is building at right.



NFW kid glove treatment helps our hottest bomber keep cool

Special polish with low-abrasive Celite guards the B-58's sensitive skin

Now J-M Celite* has a national defense assignment-helping our newest A-bomber, the Convair B-58 "Hustler," run at supersonic speeds!

Everything about this high-performance aircraft, right down to its gleaming metal skin, says "speed." This high-luster, low-friction surface has been called one of the most vital achievements in modern aircraft development.

To maintain this precision skinwithout damaging or scratching the special metal alloys-Convair has specified a new polish-cleaner called Once!. † The only abrasive in Once! is Snow-Floss, a unique polishing grade of Celite. Because of the porous, thin-walled structure of its diatomite particles, Snow-Floss never scratches. Each particle collapses like a microscopic buffer, removing foreign matter and maintaining a precision smoothness that lasts.

Snow-Floss provides easier application and rub-off, too. Highly absorptive, it soaks up and retains dirt and grease films that would otherwise resist rub-off and reduce sheen. This explains why it has gained acceptance as the major abrasive in all types of polishes.

Snow-Floss and the other Johns-Manville Celite grades produced for polishes are carefully controlled from bag to bag. Find out which fits your needs . . . call your nearby Celite engineer or write direct. Johns-Manville, Box 14, New York 16, N.Y. In Canada, Port Credit, Ont.

*Celite is Johns-Manville's registered trade mark for ita diatomaceous silica products. †Once' is a registered trade mark of the American Silicone Company, Englewood, Colorado.

Johns-Manvil





Allied Appoints Fox

James G. Fox was appointed last month as president of the National Aniline division of Al-



James G. Fox

lied Chemical Corp., New York, succeeding Chester M. Brown, who became president and chief operating officer of the parent corporation Sept. 7. With the firm since 1926, Mr. Fox was named director of operations for the General Chemical Division in 1938, director of production in 1948, director of operations in 1953, and vice-president in 1957. He became executive vice-president of National Aniline last year.

Reddish Leaves Lambert

Dr. George F. Reddish recently relinquished active duty as chief bacteriologist for Lambert-Hudnut Manufacturing Laboratories, St. Louis, division of Warner-Lambert Pharmaceutical Co., Morris Plains, N.J., to work full time as professor of microbiology and public health at the St. Louis College of Pharmacy and Allied Sciences.

Author of nearly 100 technical papers in the field of bacteriology and antisepsis, Dr. Reddish probably is best known in the disinfectant field as editor of "Antiseptics, Disinfectants, Fungicides, and Chemical Physical Sterilization," which was published in 1951.

At the 1956 annual meeting of the Chemical Specialties Manufacturers Association, Dr. Reddish received the association's annual achievement award for outstanding work in public health, disinfection ,and antisepsis.

He joined Lambert Pharmacal Co., St. Louis, in 1929, whic's later merged with Warner-Hudnut, Inc.

At one time Dr. Reddish was senior bacteriologist for research and control of antiseptics and disinfectants for the U.S. Food and Drug Administration, and while with the government he developed FDA's standard methods for testing antiseptics and disinfectants.

Lehn & Fink Earnings Rise

Earnings of Lehn & Fink Products Corp., New York, for the fiscal year ended June 30th, 1959, were \$1,316,509, or \$3.94 per share, compared with \$1,080,134, or \$3.26 per share, in 1958. Sales for the year reached a record high of \$32,625,147 compared with fiscal 1958 sales of \$30,464,197.

Armour Names Sales Rep.

J. E. Haughn has been appointed sales representative in Houston, Tex., for Armour Industrial Chemicals Co., Chicago, it was announced recently by B. W. Graham, sales director. He succeeds J. P. Badman, who has been named manager of highway construction chemicals. In his new post Mr. Haughn is responsible for sales of Armour aliphatic organic chemicals in Louisiana and eastern Texas. He has been with the company since 1957 when he began in the market development department.

Hildebrandt Elected VP

F. Dean Hildebrandt was elected executive vice-president recently of McKesson & Robbins, New York. Mr. Hildebrandt joined the company in 1945 as general manager of its newly formed chemical distributing organization. In 1955, the firm's chemical business was reorganized as an independent department and Mr. Hildebrandt was elected a vice-president.

Shulton Appoints Knapp

Robert V. Knapp has been named a sales representative for the fine chemicals division of



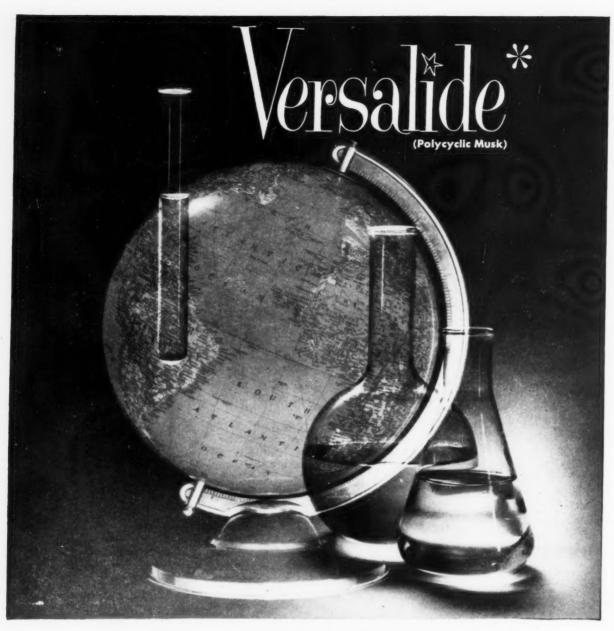
Robert V. Knapp

Shulton, Inc., New York, it was announced recently by Raymond G. McCue, sales manager. Mr. Knapp handles sales in the New York metropolitan area and New England. Prior to joining the company he was a sales representative for S. B. Penick & Co., New York.

Also announced was the appointment of John H. Hickling as manager for Latin American administration, a newly formed post in the international division. Mr. Hickling joined Shulton in 1956 and served most recently as advertising coordinator for the division.

New Rhodia Products

The development of two new products for use in insecticide formulations was announced recently by Rhodia, Inc., New York. The products, "Alamask RLT 483" and "RLT 471," are available in oil or water dispersible form and are said to provide complete abatement of insecticide malodor. Either product is effective, in concentrations of one to three ounces per 50 gallons of finished formulation containing 29 per cent diazinon or 18 per cent dieldrin in mixtures of pyrethrum and toxaphene. The company recommends six ounces of either product per 50 gallons in malathion mixtures.



an international success!

Within a year of its introduction, Versalide, Givaudan's outstanding new polycyclic musk, has met with international acceptance! Perfumers throughout the world of fragrance have recognized in its versatility and unique combination of advantages a whole new field of opportunity for creative perfumery.

Versalide lends to a perfume all the enhancement, sweetness, strength, fixation and blending properties expected only from the macrocyclic musks, and yet at a fraction of their cost.

A pure chemical body, not a mixture, Versalide is economical—stable to light, heat, air, alkali; and does not discolor soap. And its versatility is practically unlimited!

We will gladly send you a sample and more detailed information. $^*\mathrm{Reg.\ U.\ S.\ Pat.\ Cff.}$



GIVAUDAN-DELAWANNA, INC. 321 West 44th Street, New York 36, N.Y.

USI Names Richardson

Edward C. Richardson has been appointed Chicago division sales manager for U. S. Industrial



Edward C. Richardson

Chemicals Co., division of National Distillers and Chemical Corp., New York, it was announced recently by A. R. Ludlow, Jr., vice-president of sales. Mr. Richardson replaces George H. Stanton, who is now director of field sales. With the company since 1940, Mr. Richardson had been Boston division sales manager for the past nine years.

He has been succeeded in



Jesse H. Hallowell

that post by Jesse H. Hallowell who was formerly a salesman working out of the Chicago office. Prior to that Mr. Hallowell was at the company's technical service laboratory in Tuscola, Ill., where he had joined the firm in 1953.

Travelers Aid Chairmen

Gert Keller, Schimmel & Co., and Sherwood C. Chatfield, Bristol-Myers Co., recently accepted appointments as division chairmen for the 54th annual fund drive of the Travelers Aid Society of New York. Mr. Keller is chairman of the essential oils and extracts division and Mr. Chatfield heads the drugs division. Their appointments were announced by William G. Rabe, general chairman of the drive.

The Society, which aided 66,922 travelers during 1958, is supported entirely by contributions and is seeking \$110,000 to maintain its services during the coming year.

Dow Corning Names Three

William W. Pedersen, manager of the Cleveland sales office of Dow Corning Corp., Midland, Mich., has been transferred to the company's headquarters in Midland, it was announced last month by W. R. Collings, president. In his new post Mr. Pedersen is a full-time member of a new corporate

planning committee concerned with product expansion, new products, manufacturing, development, plant locations and company

Other appointments include Max H. Leavenworth as manager of the Cleveland office. He was formerly manager of the southwestern branch in Dallas, Tex., and is succeeded in that post by Edwin Haire of the Dallas office.

GAF Appoints Two

The appointment of Robert E. Brouillard as sales manager for pigments, and H. Alison Webb as sales manager for dyestuffs, for the dyestuff and chemicals division of General Aniline & Film Corp., New York, were announced last month by J. Robert Bonnar, division director of marketing. With the company since 1948, Dr. Brouillard was most recently product manager for pigments. Mr. Webb joined GAF in 1935 and prior to his new appointment was sales manager, dyestuffs and pigments.

Abrams Joins WARF

The formation of an information office headed by Joe Abrams at the Wisconsin Alumni Research Foundation, Madison, Wis., was announced last month by Ward Ross, managing director. A part of the Foundation's licensing division, the new department will keep industry and the public informed of the organization's development and licensing activities in the areas of chemicals used in rodent and insect control. The new office will also maintain an educational program to support the various inventions administered by WARF.

Mr. Abrams was previously with Glenn Chemical Co., Chicago, and had been an information specialist with the Quartermaster Food and Container Institute for the Armed Forces.

Brake Fluid Legislation

A new law stipulating specifications for automotive brake fluid has been enacted in the State of Delaware as Senate Bill 15. The requirements which were to have been established by Sept. 1 are to be in no case below the minimum specifications for heavy duty brake fluid established by SAE. The law will be effective Jan. 1, 1960.

Legislation is pending in Massachusetts which requires that "brake fluids conform to the minimum standards prescribed by the registrar of motor vehicles." The Chemical Specialties Manufacturers Association invites members' comments on Massachusetts House Bill No. 3061.

Borax Names Yannacakis

The appointment of John Yannacakis to the new product development department of U.S. Research Corp., Anaheim, Calif., a subsidiary of United States Borax and Chemical Corp., Los Angeles, was announced last month by D. S. Taylor, vice-president and general manager of the subsidiary. Mr. Yannacakis has been with the parent company since 1952.

Colgate May Appeal Ruling

Colgate-Palmolive Co., New York, announced early this month that it may appeal from the judgment of the United States District Court in San Francisco which held that its "Genie" liquid detergent conflicts with trademark rights of Jay S. Conley Co., Mountain View, Calif. The matter came before the district court in a trademark infringement suit brought by Conproduct tradenamed "Jeenie." Federal Judge Willis Ritter ruled that Colgate must halt promotion of "Genie" in 14 western states in which Conley markets its product. At the trial Colgate claimed that it had made searches in the U.S. Patent Office, conducted market surveys, and registered the trademark without opposition before it began advertising and selling "Genie."

ley against Colgate for its similar

Top Quality!
Fast Deliveries!
Assured Supply! MATHIESON

hannlamines

Mathieson ethanolamines (mono, di and tri) meet tightest specifications for the manufacture of cosmetics, surfactants, waxes and polishes.

Get complete information from your Olin Mathieson representative or write today for literature and technical data.



Staley Elects Atwood

Paul W. Atwood, president of U B S Chemical Co., Cambridge, Mass., was elected a director of



Paul W. Atwood

A. E. Staley Manufacturing Co., Decatur, Ill., last month. U B S was acquired by Staley, a corn and soybean processor, on June 30th (see Soap and Chemical Specialties, July 1959, p. 24). Also elected a director was Henry M. Staley, assistant treasurer.

Mr. Atwood continues as president of U B S, which is now a division of Staley. As director he succeeds R. E. Greenfield, former vice-president of manufacturing. Mr. Atwood has been with the Cambridge firm since 1952.

With Staley since 1956, Mr. Staley has been in the financial division for the past two years. He is the son of A. E. Staley, Jr., board chairman.

Emery to Expand Plant

A \$6,000,000 plant expansion project has just been announced by Emery Industries, Inc., Cincinnati. New construction at the firm's Cincinnati plant will increase several fold the existing capacity for production of azelaic and pelargonic acids from oleic by ozone oxidation, according to John J. Emery, the firm's president. Main uses of both azelaic and pelargonic acids are in the plastics and related industries. Their diesters are finding growing acceptance in jet engine lubricants.

Hazardous Products Laws

A bill relating to the labeling of packages of hazardous substances will become effective in the State of Ohio on Oct. 5, 1959. The law was enacted August 5 as Senate Bill 440. Its provisions cover hazardous substances intended or suitable for household use not only in the home, but also in schools, hospitals, apartment and office buildings, hotels, restaurants, and similar places. Essential provisions of the bill follow the CSMA Model Bill

The State of Illinois has enacted a "Uniform Hazardous Substances Act" which will become effective Jan. 1, 1960. This bill interprets "household use" as any use or intended use of an article in or about the living area or living quarters of a house, apartment house or other place of abode.

Top Newspaper Advertisers

Lever Brothers Co. and Colgate-Palmolive Co., both of New York, were listed among the top ten newspaper advertisers in 1958 in the recently released "Expenditures of National Advertisers in Newspapers-1958" prepared by the Bureau of Advertising of the American Newspaper Publishers Association. Lever spent \$9,220,071, which was 35.5 per cent less than in 1957, and Colgate's newspaper advertising expenditures were down 1.5 per cent from the previous year. Colgate spent \$8,276,-947 for newspaper insertions in 1958.

FTC Acts on Comstock

A consent order was approved early last month by the Federal Trade Commission requiring Comstock Chemical Co., New York, to stop allegedly misrepresenting the quality, composition, characteristics, performance, endorsement, and guarantee of its "Roll-A-Shine" automobile polishing mitt. Also subject to the order were David L. Ratke, president, Herman Liebenson, secretary, and Monroe Caine, a stockholder. In its original complaint last year (see Soap and



The time is 3:05 A.M. and all is well. At 5 A. M., twelve hours after the above wire was received at Foremost El Dorado's Oakland, California plant, this tank car loaded with Eldo Methyl Laurate 96 will be rolling.

Four days and 2400 miles later in St. Louis, an anxious Foremost customer will relax. This same tank car will roll to his siding, the seal on the dome will be broken and 8000 gallons of Methyl Laurate will be ready for use ...a full day ahead of schedule.

This kind of quick service . . . along with strict attention to the *purity* and *uniformity* of product...has made Foremost El Dorado a dependable source of coconut oil products for over 65 years.

Let us serve you with the same dependability

Even faster deliveries are available from Eastern and Mid-Western shipping points. Contact the agent nearest you or write for samples and specifications. Department D-2.

FATTY ACIDS

Caprylic Capric Lauric Myristic Palmitic Cocoleic Eldhyco Coconut

METHYL ESTERS

Caproate Caprylate Caprate
Lcurate Myristate Palmitate
Oleate Eldo*18 Coconate
*T. M. REG.

OREMOST FOOD AND CHEMICAL COMPANY



P. O. Box 599, Oakland 4, California

Atlanta: Geo. E. Missbach & Co. F
Boston: E.
N. S. Wilson & Sons E
Chicago: H
M. B. Sweet Company J

Cleveland: F. W. Kamin Company Detroit: Harry Holland & Son, Inc

Kansas City: Vulcan Sales Company Minneapolis: M. H. Baker Company

New York: H. Reisman Company Oakland: Foremost Food & Chemica

St. Louis: Harry A. Baumstark & Company

Chemical Specialties. December 1958, p. 239) the FTC charged that the mitt had little more efficiency than an ordinary soft cloth.

On Aug. 17th a New York City grand jury returned criminal informations charging Mr. Ratke with issuing false and misleading advertising for a pocket-sized radio and a battery additive called "Voltex." New York District Attorney Frank S. Hogan also reported Mr. Ratke's involvement with the "Roll-A-Shine" polishing mitt as well as a floor polishing device; "Livigen," a "skin food"; and "Green Plasma," a chemical preparation for lawns. Mr. Liebenson and Mr. Caine were also named as defendants as well as Max Laserow who was reported to have disappeared after questioning by the district attorney's office. Mr. Ratke was released in \$1,500 bail, Mr. Caine in \$1,000 bail, and Mr. Liebenson was paroled. All pleaded not guilty. The charges are misdemeanors punishable by a year in jail on each count.

Cowles Transfers Evans

Robert F. Evans, technical service representative for Cowles Chemical Co., Cleveland, has been



Robert F. Evans

transferred to the company's Los Angeles headquarters, it was announced recently by W. J. Schleicher, manager of the laundry chemical department. Mr. Evans, who previously worked out of the Cleveland office, now covers the southern California and Arizona territory. In his new post he works with Gus Wolff, who also represents Cowles in southern California, and reports directly to Pat Kack, Pacific division sales manager.

Toni Names Findlay

Albert Findlay has been appointed sales administrator for Toni Co., Chicago, division of Gillette Co., Boston, it was announced last month by Stuart K. Hensley, president. With the company since 1954, Mr. Findlay has been associated with the firm's sales administrative activities and was sales service manager for the past two years.

Kauffman to ANPA Post

John P. Kauffman, formerly director of marketing for the household products division of Colgate-Palmolive Co., New York, was recently appointed a vice-president of the American Newspaper Publishers Association, New York.



"SANITARY CHEMICALS"

by LEONARD SCHWARCZ

576 PAGES

This is the standard edition of Schwarcz' 576 page book, including in plain understandable language the facts about (1) bacteria and disease, (2) principles of disinfection, (3) disinfectants, (4) deodorants, (5) man versus insects, (6) household and industrial insecticides, (7) floor waxes and floor care, (8) rodenticides, (9) detergents and cleaners, (10) government regulations.

Gives full coverage of how, when and where to use products—information that every distributor and salesman should have if he's in the sanitary supply business.

MAC NAIR-DORLAND CO. 254 West 31st St., New York 1, N. Y. Enclosed find our check for \$4.95 (Add 50¢ outside of United States) for which please send us one copy of "Sanitary Chemicals." Company Address

Zone State

\$4.95 postpaid!

(Add 50¢ outside of United States)

SEND CHECK WITH ORDER

Add 3% Sales Tax if in New York City

Order direct from

MAC NAIR-DORLAND CO.

254 West 31st Street

New York 1, N. Y.

City ...

Solvay Names Campbell

M. James Campbell has been appointed assistant to the vice-president of the Solvay Process



M. James Campbell

Division, Allied Chemical Corp., New York, it was announced last month by I. H. Munro, Solvay president. With the company since 1939, Mr. Campbell has been manager of Solvay's Syracuse, N.Y., plant since 1958. He is succeeded in that post by Robert B. Lautner, formerly manager of the Moundsville, W.Va., plant. Moving to Moundsville to replace Mr. Lautner is Robert E. James, who was manager of the Baltimore, Md., plant. The Baltimore operation is now under the direction of Edward J. Walsh, assistant manager.

Marchon Alkyl Aryl Data

A six-page booklet describing the "Nansa" series of alkyl aryl sulfonate based detergent powders has just become available from Marchon Products Ltd., Whitehaven, Cumberland county, England. These powders are formulated built detergents offered in bulk tailored for specific end uses, such as light duty laundering, dishwashing, heavy duty applications, general household cleaning, etc.

Antara Names Distributors

Antara Chemicals, sales division of General Aniline & Film Corp., New York, recently appointed two distributors in the south. Atlanta Solvents & Chemical Co., 2323 Lanasol Road, Doranville, Ga., was named distributor in Georgia for the company's line of nonionic surfactants, sequestering agents, and ethylene and diethylene glycols. In Florida, Moss Soap Co., 1157 N.W. 22nd St., Miami, was appointed distributor. It will handle the GAF line of nonionic and anionic surfactants, sequestering agents, iodophors, ethylene and diethylene glycols and a variety of other chemicals in southern Fla.

New Johnson Distributor

Sprenger Chemicals, a division of Sprenger & Sons, Milwaukee, Wis., was appointed a distributor last month for the maintenance products of S. C. Johnson & Son, Inc., Racine, Wis. The company will handle the complete Johnson line of cleaners, waxes, floor finishes, insecticides and floor maintenance machines for commercial, industrial and institutional use.





A meeting which brought together sales representatives of White King Soap Co., Los Angeles, with media representatives from 60 southern California newspapers is conducted by, left to right at rostrum, Mart C. Spiegel, general sales manager; Bill Woods, division sales manager; and J. R. Joyce, district manager.

White King Ad Campaign

A new approach to its merchandising and marketing coordination at the local sales level was established recently by White King Soap Co., Los Angeles, when it held a meeting in July of media representatives and company sales representatives. Retail advertising managers from 60 southern California newspapers met with all of the company's sales representatives from that area to hear Mart C. Spiegel, general sales manager for White King, spell out the firm's third quarter advertising program. The

campaign was reported to include newspaper, radio, television, and magazine advertising. At the same time the details of a similar program were being announced to a northern California audience by William G. Aitken, advertising manager.

Brillo Earnings Increase

Net income of Brillo Manufacturing Co., Brooklyn, N.Y., for the six months ended June 30, 1959, amounted to \$722,458, compared with \$363,213 in 1958, 1959 net earnings per share were \$1.67, compared with 84 cents last year with the latter figure adjusted to reflect a three for one stock split in June 1959.

New Aromatic for Soaps

A new aromatic chemical suggested for use in soap and detergent fragrances has just become available from Givaudan-Delawanna, Inc., 321 W. 44th St., New York 36. Trade-named "Nerone"

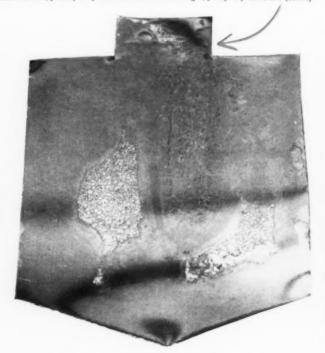
Clean

New Detergent Speeds Metal Cleaning.

Cleaned with 5% heavy duty alkaline mixture (no surfactant)

Cleaned with 5% heavy duty alkaline cleaner containing 5% alkyl aryl sulfonate (active)





SOAP and CHEMICAL SPECIALTIES

it is said to improve the natural effect in blended compositions and to "fortify" natural oils, such as petitgrain, vetiver, and geranium.

"Nerone" is a synthetic ketone and its odor is said to resemble that of petitgrain oil. A nine page bulletin and a number of data sheets, available from Givaudan, supply information on the properties, applications and formulating, characteristics of the new product.

Time Detergents in Pail

Time Chemical, Inc., 3950 S. Karlov Ave., Chicago 32, recently introduced its full line of powdered detergents packed in a reusable, galvanized pail. Called "Pail Pac," the container, when empty, can be used as a mop bucket, refuse container, or wash bucket. Besides all-purpose detergents, the company is packing its hand, dish, and glass cleaners, car shampoos, and floor and wall cleaners in the pails.

Ward Joins Crag

Eugene G. Ward recently joined the sales staff of Crag Agricultural Chemicals Division of



Eugene G. Ward

Union Carbide Chemicals Co., New York. After a brief training period at Crag's White Plains, N. Y., headquarters, Mr. Ward joined the company's field sales organization. As an entomologist, he is active in sales of Union Carbide's "Sevin" insecticide which is being introduced to the commercial market this year for insect control on crops.

Premium Conference Set

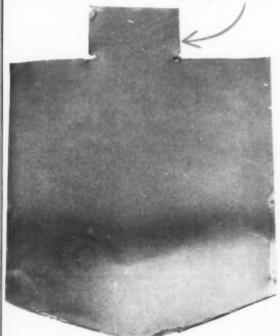
The Premium Advertising Conference of the Premium Advertising Association of America, New York, has been scheduled for Tuesday morning, Sept. 15th, at the Hotel Astor in New York, it was announced last month by Gordon C. Bowen, PAAA board chairman. The conference will be held in conjunction with The New York Premium Show set for Sept. 14-17 at the Hotel Astor.

Wrisley Names Edwards

Wayne E. Edwards was recently appointed director of the research and product development division of Allen B. Wrisley Co., Chicago, Previously he was director of product development and analytical research for Purex Corp., South Gate, Calif.

TRITON QS-15

Cleaned with 5% heavy duty alkaline cleaner containing 5% Triton QS-15 (active)



In controlled laboratory tests, mild steel panels coated with mineral oil (Bright stock) were rotated in detergent solutions for 5 minutes at 85° C.; rinsed in cold water and drained for 20 seconds. Residual oil was observed after spraying panels lightly with cold water.

Triton QS-15 improves the cleaning effectiveness of alkaline baths because of its excellent detergency, solubility and stability in alkali solutions—including caustic. Our tests established these important advantages for Triton QS-15 over alkyl aryl sulfonates: At equal active concentration Triton QS-15 cleans three to four times faster; in cleaning cycles of equal duration it takes one-half to two-thirds less Triton QS-15.

Improve your heavy duty alkaline cleaner formulations with TRITON QS-15. It is suggested for the cleaning of metals, bottles, food and meat processing equipment, and for any application where faster, better cleaning with alkaline solutions is important. Write for TRITON QS-15 Bulletin, San-202.

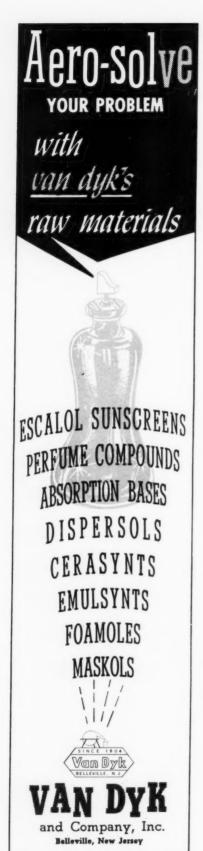


Chemicals for Industry

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Triton is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.



W YORK - CHICAGO - LOS ANGELES - TORONTO

Hair Spray Resin

(From Page 173)

hair spray use is 90 per cent of that required for theoretical neutralization.

The bulletin gives a formula for the calculations of the amount of AMPD needed to react with 100 per cent of the theoretical acidity present in "Resyn 28-1310." A table illustrating the effect of the degree of neutralization on film properties is also included.

The following compounding procedure is suggested: Dissolve 4.4 parts of AMPD in 60 parts of SD-40 anhydrous alcohol; slowly add 40 parts of "Resyn 28-1310" pearls to the mixture with agitation (heat aids solubilization); when mixture becomes viscous, add additional SDA-40 to complete solubilization; cool and filter; add perfume, lanolin and other ingredients. Adequate agitation is essential to prevent clumping.

Two formulations based on the new copolymer are suggested:

Formulation I

	parts by weigh
"Resyn 28-1310"	3.45
AMPD*	0.38
Alcohol soluble	
lanolin**	0.90
Isopropyl myristate	
(cosmetic grade)	0.40
Dipropylene glycol	0.10
Perfume oil	0.35
SDA-40 anhydrous	94.42
Total	100 00

Formulation II

	parts by weigh
"Resyn 28-1310"	2.40
AMPD*	0.22
Water soluble	
lanolin***	0.10
Silicone 555	0.10
Perfume oil	0.40
SDA-40 anhydrous	96.78
Tota!	100.00
*Commercial	Solvents Corp.
**Such as	"Isopropylan 33" o
Robinson Wagner	Co., Mamaroneck
N. Y.	
***Such as	"Ethoxylan 100" of

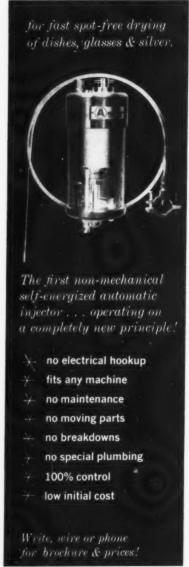
Formulation I will form a softer film than II because of the higher percentage of AMPD. For pressure packaging 30 per cent of

N.I. Malmstrom & Co., Brooklyn, N. Y.

RINSE ADDITIVES

can be the most profitable item in your line with the

R-3 INJECTOR



ALMO LABORATORIES

424 Madison Avenue, New York 17, N. Y PLaza 8-2740 concentrate (either I or II) is filled with 70 per cent propellant (50/50 mixture of propellants 11 and 12.)

Textiles & Detergency

(From Page 65)

R. Mautner, W. G. Summer, and Mrs. W. N. Pardy who assisted in preparation of the manuscript.

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Solvay Sales Changes

Four appointments in the sales department of the Solvay Process Division of Allied Chemical Corp., New York, were announced last month by Verne W. Aubel, Solvay director of sales. Robert E. Clagett has been appointed assistant manager of the Pittsburgh. Pa. branch sales office, and Richard A. Marshall has been named assistant to the manager of the organic chemicals section. In two transfer appointments, Stuart P. McNeill moves from the Philadelphia branch to New York, and Theodore W. Reed, formerly in New York, is now with the Boston branch.

Surfactant Tolerances

Concentrations of surface active agents in aqueous solutions tolerated by the skin on repeated application and by the mucuous membrane of the eye are the subject of a recent report by Dr. A. J. Lehman, chief of the Division of Pharmacology, and Dr. J. H.

Draize, chief, skin toxicity branch of the Division of Pharmacology of the Food and Drug Administration. The report includes a tabular summary of tolerance data established by the Draize procedure on 39 anionic, cationic, and nonionic trade name surfactants. The report appears in the Quarterly Bulletin of the Association of Food and Drug Officials of the United States, volume 23, p. 150;

Miss Colton Tours Europe

Kay Colton, manager of cosmetic sales for Morningstar-Paisley, Inc., New York, returned to the United States early this month after more than a month's tour of Europe, where she called on cosmetic manufacturers. Visiting seven countries, she met with cosmetics manufacturers and salon operators to discuss trends in cosmetics manufacturing, packaging, and promotion.

surfactant

performance you want with Poly-Tergent

These nonionic surface active agents are effective dispersants, emulsifiers, wetting agents and detergents in all types of application. They offer unusual solubility values and results in the presence of acids. alkalis and polyvalent metallic salts.

The Poly-Tergent surfactants are available in three different compositions, each with a range of ethylene oxide content - J Series, polyethoxylated tridecyl alcohol; G Series, polyethoxylated octyl phenol; B Series, polyethoxylated nonyl phenol.

NEW-Technical data sheets are available on all of the Poly-Tergent surfactants. Write for information and samples.



OLIN MATHIESON

CHEMICAL CORPORATION

Chemicals Division . 745 Fifth Ave., N. Y. 22, N. Y.

Maintenance Show-Conference, Sept. 22-24

PROGRAM details of the conference to be held in conjunction with the 4th annual Sanitation Maintenance Show in New York Sept. 22-24 were announced recently by Gerard J. Riley, executive secretary. The show and conference are sponsored by the Institute of Sanitation Management. Conference sessions to be held at the Hotel New Yorker will run concurrently with the trade show of sanitation and maintenance chemical specialties and equipment. The exhibits will be on display at the New York Trade Show Building, one block north and across the street from the Hotel New Yorker on 8th Avenue.

Among the highlights of the conference program is an address Tuesday afternoon, Sept. 22nd, by Marcus J. O'Brien, Department of Water and Power, Los Angeles. He will discuss "Selling a Modern Building Sanitation Program to

Top Management" at a session of ISM's Buildings Division. A symposium on maintenance paints also will be presented during a session of the Food Processing Division that afternoon.

Another symposium, dealing with "The Dollars and Sense of Management Sanitation", will be presented at a general session the morning of Sept. 23rd. It will seek to answer the question, "Can we prove that sanitation as a managed function is essential to the economy of modern industrial and business operations?"

The Industrial Division will meet Wednesday afternoon and will hear H. H. Mason of Radio Corp. of America, Lancaster, Pa., discuss how his company saved \$85,000 in two years on a cleaning program. His talk is titled "Budgeting Cleaning Costs for Office Buildings and Plant Operations." A presentation by Eastman Kodak

Co., Rochester, N. Y., and American Telephone & Telegraph Co., New York, will deal with audio visual training in sanitation and "How to Produce Low Cost Training Films."

"Sanitary Control of the Hospital Environment" will be discussed by Keith Fitch of Klenzade Products, Inc., Beloit, Wis., at a lead-off session of the Buildings, Industrial, and Institutional Divisions, Thursday morning, Sept. 24th. Other speakers and their subjects include Richard F. Ehmann, Port of New York Authority, New York, on "A Study of Labor Usage to Determine Cleaning Costs in Five Major Office Building Operations in Greater New York City, and Albert J. Burner, also of the Port of New York Authority and ISM president-elect, on the "Levittown School Survey," a study of custodial and cleaning in 13 elementary and high schools.

At a concurrent session the morning of Sept. 23rd, A. E. Abrahamson, chief, wholesale division, New York City Health Department, will discuss sanitation in food processing. He will be followed by J. Lloyd Barron, past-president of ISM and director-at-large, and director of sanitation, National Biscuit Co., New York, who speaks on "What is Wrong with Official Regulation of Food Sanitation."

Approximately 60 companies will have exhibits at the Sanitation Maintenance show which will be open from 12:30 to 6 p. m. Sept. 22:24. Among the firms exhibiting are Davies-Young Soap Co., Dayton, O.; U. S. Borax and Chemical Co., Los Angelés; R. M. Hollingshead, Inc., Camden, N. J.; Horizon Industries, Milwaukee, Wis.; Huntington Laboratories, Inc., Huntington, Ind.; Masury-Young Co., Boston; and G. H. Packwood Co., St. Louis.

A registration fee of \$5 for members and \$8 for non-members will be charged for admission to the conference, according to Mr. Riley. However five dollars of the \$8 fee may be applied to ISM membership for the last half of this year.



New Fleuroma Sales Rep.

Fleuroma, Inc., New York perfume and aromatic specialties house, announced last month the



Carl Goldschrafe

appointment of Carl Goldschrafe as midwestern sales representative. He has established a Fleuroma sales office at the Pittsfield Building, 55 East Washington St., Chicago 2. Mr. Goldschrafe comes to Fleuroma from Helene Curtis Industries, Inc., where he served as director of packaging.

Vanderbilt Appoints Hahn

Russel J. Hahn was recently appointed sales engineer in the specialties department of R. T. Vanderbilt Co., New York. The department produces and markets chemicals for the pharmaceutical, cosmetic, agricultural, and lumber industries. In his new post Mr. Hahn services Vanderbilt accounts

Russel J. Hahn



in the middle Atlantic states from Maryland north, including eastern Pennsylvania, and New England, as well as the Province of Quebec

in Canada.

Armour Joins Divisions

Formation of Armour Industrial Chemical Co., Chicago, was announced last month by E. W. Wilson, executive vice-president of Armour and Co. The newly formed company comprises Armour's fatty acids, fatty nitrogen derivatives, and ammonia divisions. It is under the direction of M. E. Lewis, general manager. B. W. Graham continues as director of sales for the fatty acids and derivatives divisions. The chemical research division continues under the direction of M. R. McCorkle and C. E. Lang remains as manager of the plant at McCook, Ill.

Armour Industrial Chemical Co., a division of Armour and Co., has moved its management and sales personnel to new quarters at 110 North Wacker Drive.

Norda Appoints Amaducci

Louis Amaducci has been named vice-president of Norda Essential Oil and Chemical Co., New



Louis Amaducci

York, it was announced recently by Herman J. Kohl, board chairman and president. With the company for the past 19 years, Mr. Amaducci was most recently in charge of plant operations. His headquarters are at the firm's Boonton, N. J., plant.

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(Continued on Page 208)

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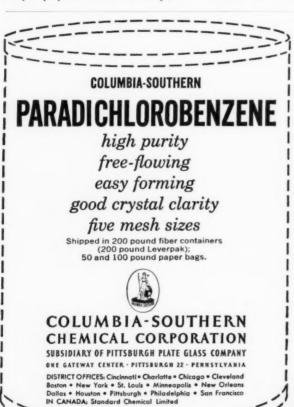
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Olin to Make Glycerine

A synthetic glycerine plant, facilities to make sulfamic acid, the doubling of current glycol ether and surfactant production are part of a \$30,000,000 expansion program currently being pursued by Olin Mathieson Chemical Corp., New York. Details were announced last month by Olin president Stanley de J. Osborne.

Glycerine and epichlorohydrin facilities to be built in Brandenburg, Ky., are expected to be completed in early 1961. A new process developed by Olin will be used. Expanded facilities for the manufacture of glycols, also located at Brandenburg, will be on stream by the first of next year, according to Edward Block, senior vice-president in charge of the chemicals division. The sulfamic acid plant under construction at Joliet. Ill., will start production at about the same time. Olin's Joliet works is currently making phosphate for detergents and hydrofluoric acid.







The newly formed Canadian Sanitation Standards Assn. recently held its second quarterly meeting at the King Edward Hotel, Toronto. More than 35 members and guests attended the dinner meeting at which Stan McKenzie of Thomas L. Gibson

Co., Scarborough, Ontario, association president, invited applications for membership from established manufacturers, distributors, jobbers, cleaning maintenance contractors, and suppliers to the sanitation industry.

Oil Chemists Meet in Los Angeles, Sept. 28

A TECHNICAL program consisting of 51 papers is scheduled for the 33rd fall meeting of the American Oil Chemists' Society, Sept. 28-30, at the Statler Hilton Hotel, Los Angeles. Papers will be presented in two sessions on Monday, Sept. 28, one session in the morning of Tuesday, 29th, and in two sessions on the final day of the meeting.

The vast range of subjects includes the following of immediate interest to readers of SOAP and Chemical Specialties: "Chloroisocyamuric Acid Compounds as Bleaching and Sanitizing Agents," by R. L. Liss and T. B. Hilton, Monsanto Chemical Co., St. Louis, "Amides of Alpha-Sulfonated Fatty Acids," by J. K. Weil, A. J. Stirton, and R. G. Bistline, Jr., Eastern Regional Research Laboratories, Philadelphia: "Removal of Fatty Soil from Glass-Electrolyte Detergent Builder Effect," by R. M. Anderson, J. Satanek, and J. C. Harris, Monsanto Chemical Co., Dayton, O.; "Sulfates of Ethoxylated Tridecyl Alcohol in Dishwashing," by Wayne C. Schar, Enjay Laboratories, Linden, N.J.: "Studies in the Development of Antibacterial Surfactants. I. Institutional Use of Antibacterial Fabric Softeners," by W. M. Linfield,

J. C. Sherrill, R. E. Casely, D. R. Nocl, and G. A. Davis, Armour and Co., Chicago: "Studies in the Development of Antibacterial Surfactants. II. Performance of Germicidal and Deodorant Soaps," by W. M. Linfield, R. E. Casely, and D. R. Noel, Armour and Co.; "Analysis of Surfactant Mixtures." by L. E. Weeks, J. T. Lewis, and T. C. Tesdahl, Monsanto, St. Louis; "Effect of Temperature on Critical Micelle Concentration," by M. E. Ginn, F. B. Kinney, and J. C. Harris, Monsanto, Dayton: "The Fatty Acid Composition of Clothes Soil," by W. C. Powe and W. L. Marple, Whirlpool Corp., St. Joseph, Mich.: "Determination of Some Factors Influencing Soap Detergency Evaluations," by Walter Brooks and Robert B. Hull, Los Angeles Soap Co., Los Angeles.

Several presentations deal with the role of gas chromatography in the analysis of various fat derivatives and surfactant components. The program includes plant trips, one of them to Beckman Instrument Co.

New Mold Release Fluid

A new mold release fluid to free molded polyurethane foam from "Fiberglass" (Owens-Corning Fiberglass Corp.) polyester molds has just been introduced by Shanco Plastics and Chemicals, Inc., Tonawanda, N.Y. "Shanco 32-6" is designed to form an interior mold coating to which polyurethane will not adhere. It is solid at polyurethane's foaming temperature and readily removable at slightly highcr temperatures.

Details on mode of application and other pertinent information are available from Shanco.

West Reports Sales Rise

Net sales of West Chemical Products, Inc., Long Island City, N.Y., for the six months ended May 30, 1959, rose to \$10,271,000 from \$9,652,000 in the corresponding 1958 period. Net income was \$251,000, or 61 cents per common share, compared with \$221,000, or 52 cents per share in 1958.

Letters

(From Page 49)

issued earlier this year by the General Chemical Division of Allied Chemical Corp., 40 Rector St., New York 6, N. Y. We checked the second edition of Chemical Trade Names and Commercial Synonyms, A Dictionary of American Usage, by Williams Haynes, published by D. Fan Nostrand Co., New York, which listed (p. 214) Walter H. Jelly & Co. as the source for "Hartolan," Ed.

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Acme Shellac Products Co	Foremost Food & Chemic Fries & Fries, Inc.
Semet-Solvay Petrochemicals Div. 106 Solvay Process Division 33, 71 Almo Laboratories Co. 148 American Can Co. 148 American Cyanamid Co. 41, 67 Andersen, Dr. Carl N. 203 Antara Chemicals Div., General Aniline & Film Corp. 155 Argueso & Co., M. 126 Arizona Chemical Co. 38	Gard Industries, Inc
Arkansas Louisiana Chemical Corp. 16 Armour Industrial Chemical Co	Harchem Division, Wallac Tiernan, Inc. Hill Top Research Institut Hooker Chemical Corp Hudson Laboratories, Inc.
Badertscher, A. Edison	Jefferson Chemical Co Johns-Manville
Blockson Chemical Co. 9 Books 32, 110, 156, 194 Brockway Glass Co. 128 Builders Sheet Metal Works, Inc. 154	Knox Glass, Inc Kroner Laboratories, Inc Krystall Chemical Co
Candy & Co. 8 Central Can Co. 136 Chase Products Co. 153 Chemical Specialties Mfrs. Assn. 76 Clarkson Laboratories, Inc. 153 Columbia-Southern Chemical Corp 108, 109, 208 Continental Can Co. 138 Continental Oil Co. 17 Cowles Chemical Co. 70 Cox, Dr. Alvin J. 203 Crown Cork & Seal Co., Inc. 130	La Wall & Harrisson Leberco Laboratories Lehmann Co., J. M. Maas Chemical Co., A. R. Mantrose Corp., The Mazzoni, S.p.A., G. McCutcheon, Inc. John W. McLaughin Gormley King Newman Tallow & Soap Machinery Co. Norda
Darling & Co. 200 Dawe's Laboratories, Inc. 206 Dema Engineering Co. 36 Dodge & Olcott, Inc. 2nd Cover Dow Chemical Co., The 44 Dow Corning Corp. 96 Dreyer, Inc., P. R. 176 du Pont de Nemours & Co., E. I. 152 Durez Plastics Division 160	Old Empire, Inc. Olin Mathieson Chemical Co. Chemicals Division Onyx Oil & Chemical Co. Oronic Chemical Co. Penick & Co., S. B. Peterson Filling & Packagin
Eastman Chemical Products, Inc. 90 Emery Industries, Inc. 29 Enjay Co. 48 Ertel Engineering Corp. 166 Esbec Chemical Division 153	Pfizer & Co., Charles

irfield Chemical Division	Price, Dr. Donald
elton Chemical Co	Procter & Gamble Co 52
oremost Food & Chemical Co 193	- Control Control
ies & Fries, Inc 202	Rapids Machinery Co 166
itzsche Brothers, Inc 184	
	Rawleigh Co., W. T
	Reichhold Chemicals, Inc
rd Industries, Inc 153	Rohm & Haas Co
lespie-Rogers-Pyatt Co 120	Roure-Dupont, Inc. 42, 43
vaudan-Delawanna, Inc 112, 190	Koure-Dupont, 10c 42, 43
dden Co., The	
ttscho, Inc. Adolph 156	Schimmel & Co
oss & Co., A	Scientific Associates
ardian Chemical Corp 201	Scientific Filter Co
	Shanco Plastics & Chemicals, Inc 98
	Shulton, Inc. 12
rchem Division, Wallace &	Sindar Corp
Yiernan, Inc	Foster D. Snell, Inc
oker Chemical Corp	Solvents & Chemicals Group, The 158
dson Laboratories, Inc. 203	Sonneborn Sons, Inc., L
dson Laboratories, Inc 203	Spraying Systems Co. 206
	Stalfort & Sons, Inc., John C. 132, 153
erson Chemical Co 104	Stepan Chemical Co
ns-Manville	Sterwin Chemicals Inc
100	Stillwell & Gladding, Inc
	Sun-Lac, Inc. 153
ox Glass, Inc	Sun Oil Co 114
ner Laboratories, Inc 203	
stall Chemical Co 69	Testfabrics, Inc. 205
	Tex-Ite Products Corp 154
	Thomasson of Pa 154
Wall & Harrisson 203	27th Exposition of Chemical
erco Laboratories	27th Exposition of Chemical Industries 206
mann Co., J. M 172	
	Ultra Chemical Works
C1 1 1 C 1 D 10 10	Ungerer & Co
s Chemical Co., A. R 39, 40	Union Bag-Camp Paper Corp 124
trose Corp., The	
zoni, S.p.A., G	Union Carbide Corporation, Silicones Division168
utcheon, Inc. John W	Union Carbide Chemicals Co., Div. 134
aughin Gormley King Co 78	Union Standard Equipment Co 207
	U. S. Borax & Chemical Corp 6
man Tallow & Soap	U. S. Bottlers Machinery Co 166
ichinery Co	U. S. Industrial Chemicals Co 73, 74
a	
	van Ameringen-Haebler,
	Inc. 123, 4th Cover
Empire, Inc 156	Van Dyk & Co., Inc 198
Mathieson Chemical Corp.,	Verona Aromatics Division
emicals Division 127, 192, 199	
Oil & Chemical Co	Wells, F. V
ite Chemical Co	West End Chemical Co
	Western Filling Corp. 154
k & Co., S. B 77	Western Petrochemical Corp.,
son Filling & Packaging	Warwick Wax Division
p	Westvaco Chlor-Alkali Div
& Co., Charles	Westvaco Mineral Prods. Div 14
lelphia Quartz Co	Wisconsin Alumni Research Found, 205
California Co 4, 180	Witco Chemical Co 50
's Frutal Works, Inc 15	Wyandotte Chemicals Corp 10, 11
inyl Chemicals, Inc 88	
ion Valve Corp 131	Zimoron & Co. William 202

COMING MEETINGS

Aerosol Clinics (sponsored by Aerosol Division of CSMA). New York City, Oct. 17, Hotel McAlpin. Chicago, Oct. 24, Hotel La Salle.

American Chemical Society, national meeting, Atlantic City, N. J., Sept. 13-18.

American Oil Chemists Society, annual meeting, Statler Hilton Hotel, Los Angeles, Sept. 28-30: spring meeting, Baker Hotel, Dallas, April 4-6, 1960.

'Association of American Soap & Glycerine Producers, 33rd annual convention, Waldorf-Astoria Hotel, New York, Jan. 20-22.

Canadian Manufacturers of Chemical Specialties, second annual meeting, Royal York Hotel, Toronto, Nov. 2-4.

Chemical Specialties Manufacturers Association, 46th annual meeting, Mayflower Hotel, Washington, D. C., Dec. 7-9; 46th midyear meeting Drake Hotel, Chicago, May 16-18.

Drug, Chemical & Allied Trades Section, 69th annual meeting, Sagamore Hotel, Bolton Landing, Lake George, N. Y., Sept. 17-20.

Industrial & Building Sanitation - Maintenance Show and Conference, N. Y. Trade Show Building and New Yorker Hotel, New York, Sept. 22-24.

National Agricultural Chemicals Association, 26th annual meeting, French Lick - Sheraton Hotel, French Lick, Ind., Oct. 21-23,

National Hotel Exposition. 44th annual show, Coliseum, New York, Nov. 2-6.

National Packaging Show, Convention Hall, Atlantic City, N. J., April 4-8, 1960.

National Pest Control Association, annual convention, Biloxi, Miss., Oct. 19-22.

National Sanitary Supply Assn. 37th annual convention. Fontainebleau Hotel, Miami, Fla., May 22-25, 1960.

Packaging Institute, 21st annual forum, Statler Hotel, New York, Nov. 17-19.

Packaging Machinery Manufacturers Institute, show, Coliseum, New York, Nov. 17-20.

Plant Maintenance & Engineering Show, Convention Hall, Philadelphia, Jan. 25-28.

Society of Cosmetic Chemists, New York Chapter, monthly meetings, New Yorker Hotel, Sept. 9, Oct. 7, Nov. 4.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meetings, Roosevelt Hotel, New York, Sept. 15; Oct. 13; Nov. 4; and Dec. 2.

Toilet Goods Association. scientific section, Waldorf-Astoria Hotel, New York, Dec. 1, 1959; May 11, 1960. 25th annual meeting, Poland Springs House, Poland Springs, Me., June 27-29, 1960.



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Eale Ends

T HE thirteen cleanest school children in all of France were recently honored. Of all things, they received,—not dolls, not bikes, not fishing rods, not anything that kids would really go for,—but their weight in soap. This averaged out about 540 cakes of soap perkid. First we ever knew that a gift of soap would induce a boy to keep his neck clean. Probably the gifts were for the parents anyway. They probably had the most to do with keeping the kids clean. An incentive, not for the kids, but for the parents!

At the largest encampment of Girl Scouts in history held last month on 400 acres of camp ground near Colorado Springs, Colo., the problem of bugs was a big one. To keep down the population of ants, mosquitoes, flies, et al, the entire 400 acres was sprayed with a Chlordane solution which did a swell control job much to the delight of veteran campers. All told there were 8,500 teen age girls and 1,500 adults attending from all parts of the world. No ants in the potato salad. What a welcome relief.

Ben and Mrs. Perry (Perry Brothers, Inc., Woodside, N. Y.) still have stars in their eyes over that recent trip to Hawaii. Quite a jumket, Ben raves. He and the missus flew over to the Islands; returned to the mainland on the Matsonia, and then visited Los Angeles and Las Vegas before trudging

home, happy but broke, to good old NYC.

Bon Ami is the first nationally advertised household product to contain the new Du Pont oxygen bleaching compound. "Oxone." This is said to mark the first change in the formula of Bon Ami in the 75 year history of the product. Bon Ami stated that they chose "Oxone" because it is an excellent bleach and is free from the chlorine odor common to other bleaches. Chemically the new product is potassium monopersulfate. Du Pont states that it will be sold principally as an ingredient for dry laundry bleach.

This thing must be contagious. In the July issue we mentioned that Vic Williams of Monsanto had made himself a hole-in-one. Now, Bob Crockett, vice-prez and secretary of Oil Specialties & Refining Co. (they really make floor waxes) over in Brooklyn, proudly announces that on July 30 he sank his tee shot on the 159 yard eighth hole at Maplewood (N. I.) Country Club. The bar bill was awful, Bob tells us.

Know what A. O. Samuels, now described as "a Bridgeport investor", is doing? He's in the hotel business. Bought the Hotel Green in Danbury last January, and announced last month he'll tear it down and build a snappy new

Ostensibly on a business trip, Abraham H. (Woody) Wiener, president of Standard Chlorine Chemical Co., S. Kearny, N. J., sails on you-know-what-liner for parts European. Actually, we understand Abe was trying to escape the clutches of several gin rummy sharps, who have been taking him quite consistently of late. As he waves a disgusted "good riddance" to his pals among the card people, Abe headed for Europe where he visited England, France and the Scaninavian countries.





Youthful ballerina, Pamela Elaine Peterson, 11, oldest of four children of Elaine and Harry Peterson, Peterson Filling and Packaging Co., Danville, Ill., started her ballet and acrobatic dancing career at age 3. Already she has made 10 appearances on TV in group and solo numbers. In seventh grade at Roselawn School, Danville, "Pepi's" other activities include studying violin and trampoline (not a musical instrument). She also takes golf and swimming lessons, and according to her father, is an "accomplished" softball player. Elaine and Harry are also the parents of Liane, 10. Kevin, 8; and Daryl, 2.

hostelry on the same sits. The new hotel to be known as the Danbury New Englander. Hot and cold running aerosols in every room, we suppose.

Another golf story: The young man named Peter Lodes, whose picture blasting out of a sand trap (like father like son) made the sports page of the New York Times on Aug. 20, was none other than the offspring of Fred Lodes acrosol tycoon and head of Lodes Aerosol Consultants, N.Y.C. Peter, following in his father's footsteps, hit one into a sand trap during the Westchester County Golf Assa's junior championship last month. A Times' photographer happened to be on hand, and presto! our photogenic Master Lodes made the paper.

How about that! Theodore II. Elder certainly knows what he wants to do. Accepted for medical school 13 years ago, Ted has just resigned as sales manager of American Alcolac Corp., Baltimore, to achieve a life-long ambition, that of becoming a medical doctor. Personal problems delayed his schooling, but now he returns to the University of Maryland this fall to study medicine. Wow! That's determination.

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